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David S. Harrison, Executive Director

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THE STATE ENERGY FACTBOOK

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THE STATE ENERGY FACTBOOK

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CONTENTS

I. INTRODUCTION 1

II. HOW TO USE THE STATE ENERGY FACTBOOK 9

III. HIGHLIGHTS OF TABLES 13

Energy Expenditures, Costs, and Prices 13
Tables 1-3 14

Energy Production 21
Tables 4-6 22

Energy Consumption 29
Tables 7-19 32

IV. METHODOLOGY 58

V. GLOSSARY 61

CHARTS AND TABLES

INTRODUCTION CHARTS

Chart 1 .... U.S. Energy Consumption and Expenditures: 1970-1982 2
Chart 2 .... Percent Energy Self-Sufficiency: 1981 3
Chart 3 .... Natural Gas Expenditures and Value of Production: 1981 . . 5
Chart 4 .... Commodity Exchanges: 1970-1981 6

ENERGY EXPENDITURES, COSTS, AND PRICES TABLES

Table 1 .... Total State Energy Expenditures: 1970 and 1980 14
Table 2 .... Average Household Energy Costs: 1970 and 1980 16
Table 3 .... Industrial Energy Prices: 1980 18

ENERGY PRODUCTION TABLES

Table 4 .... State Energy Production By Source as a Percentage of Total National Production: 1981 22
Table 5 .... Energy Self-Sufficiency Index: 1981 24
Table 6 .... Natural Gas Overview: 1981 26

ENERGY CONSUMPTION TABLES

Table 7 .... State Energy Consumption By Source as a Percentage of State Total: 1981 32
Table 8 .... State Energy Consumption By Source as a Percentage of National Total: 1981 34
Table 9 .... Residential Sector Energy Consumption By Source as a Percentage of State Total: 1981 36
Table 10 .... Commercial Sector Energy Consumption By Source as a Percentage of State Total: 1981 38
Table 11 .... Industrial Sector Energy Consumption By Source as a Percentage of State Total: 1981 40
Table 12 .... Residential Sector Energy Consumption By Source as a Percentage of National Total: 1981 42
Table 13 .... Commercial Sector Energy Consumption By Source as a Percentage of National Total: 1981 44
Table 14 .... Industrial Sector Energy Consumption By Source as a Percentage of National Total: 1981 46
Table 15 .... Transportation Sector Energy Consumption as a Percentage of National Total: 1981 48
Table 16 .... Utility Sector Energy Consumption By Source as a Percentage of State Total: 1981 50
Table 17 .... Utility Sector Energy Consumption By Source as a Percentage of National Total: 1981 52
Table 18 .... Electric Utility Sales and Energy Losses as a Percentage of Total State Energy Consumption: 1981 . . 54
Table 19 .... Percentage of Households Heating By Energy Source: 1980 . . 56

I. INTRODUCTION

Ten years ago, the Organization of Petroleum Exporting Countries initiated an oil embargo against the United States. The effects were immediate and profound. For the first time, the nation as a whole experienced the vulnerability of its dependence on energy imports.

Although the crises of the 1970s have come and gone, the nation still feels the impact of rapid increases in energy prices. Several factors have contributed to these price trends. The oil embargo, the Iranian revolution, and decontrol of domestic oil prices resulted in substantial price increases. Between 1970 and 1982, after adjusting for inflation, residential oil prices increased an average of 160 percent; natural gas, 109 percent; and electricity, 37 percent. Industrial energy prices increased even more dramatically: oil, 222 percent; natural gas, 360 percent; and electricity, 115 percent. During the same period, inflation was 126 percent and real per capita disposable income increased 24 percent.

The impact of inflated energy prices has been particularly severe in the Northeast-Midwest region. The State Energy Factbook provides information on energy trends over the last decade, along with state and sector detail on energy expenditures, price, production, and consumption. It compares total state energy expenditures and home energy costs for 1970 and 1980, and details industrial prices, production, and consumption for 1981, the most recent year available.

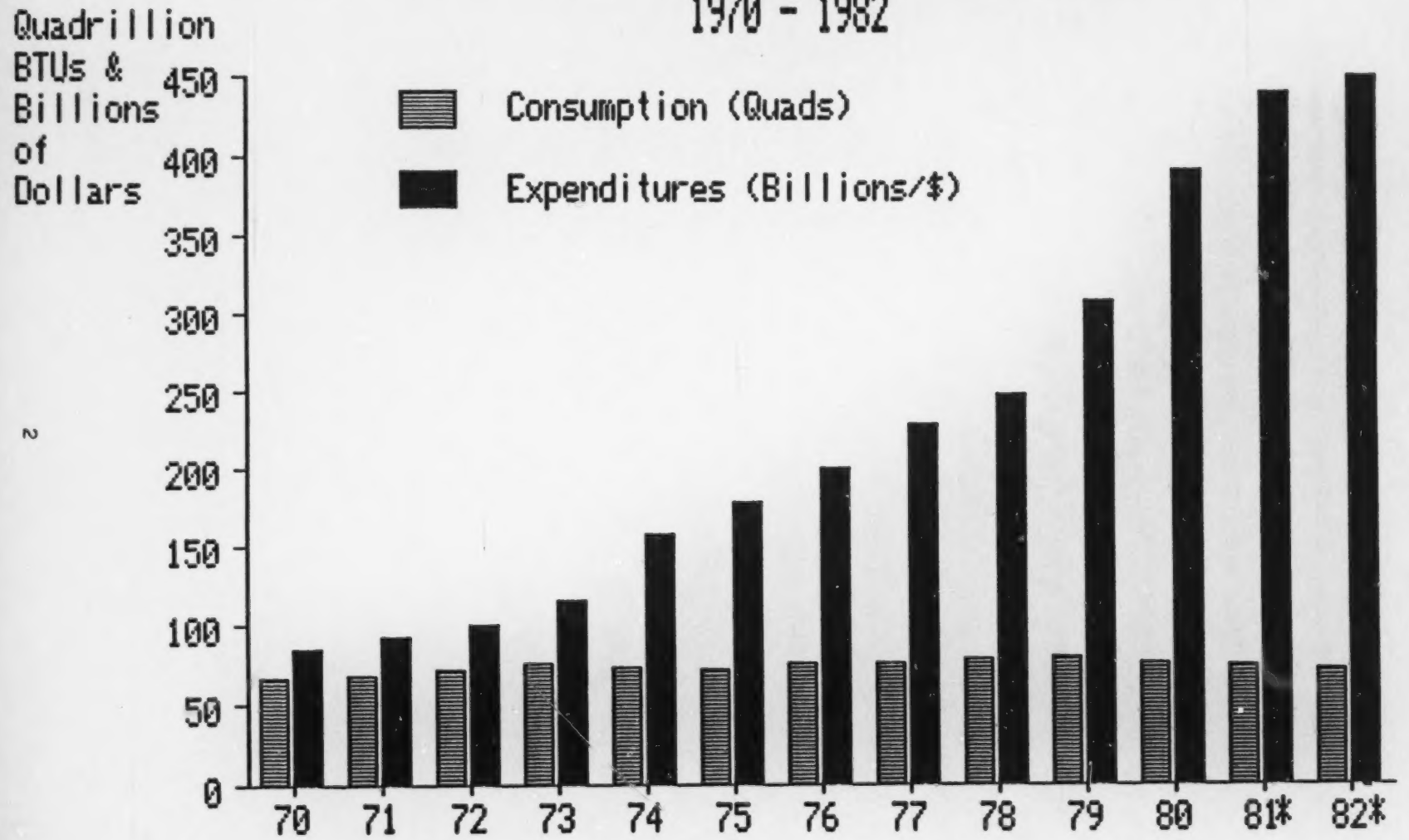
To comprehend fully the inordinate effect energy prices have had on the economy in recent years, it is important to compare energy expenditures with energy consumption. The chart on the next page shows the increase in size and percentage of national energy spending over the past decade. In 1973, the nation paid $115 billion for 75 quads of energy; by 1982, the bill was estimated at $450 billion for 71 quads. In other words, the nation used less energy in 1982 than in 1973, but paid far more for it. Energy expenditures increased from 9 percent of the gross national product in 1973 to 15 percent by 1982.

Residents of the Northeast and Midwest especially have been hit hard by the increased cost of energy. Household energy costs in the older industrial states are the highest in the nation. In 1980, the average household energy bill (excluding transportation costs) in New England was $1,203, in the Mid-Atlantic states $1,019, in the Midwest $971, in the South $821, and in the West $679.

The states in the Northeast-Midwest region remain more vulnerable to supply disruptions and related price increases. On the average, they produce less than one-third the amount of energy they consume. The bulk of the region's energy production is accounted for by coal, wood, and nuclear power. In stark contrast, several states in the South and West with oil, gas, and coal resources produce far more than they consume (see Chart 2).

Chart 1

U.S. Energy Consumption and Expenditures 1970 - 1982

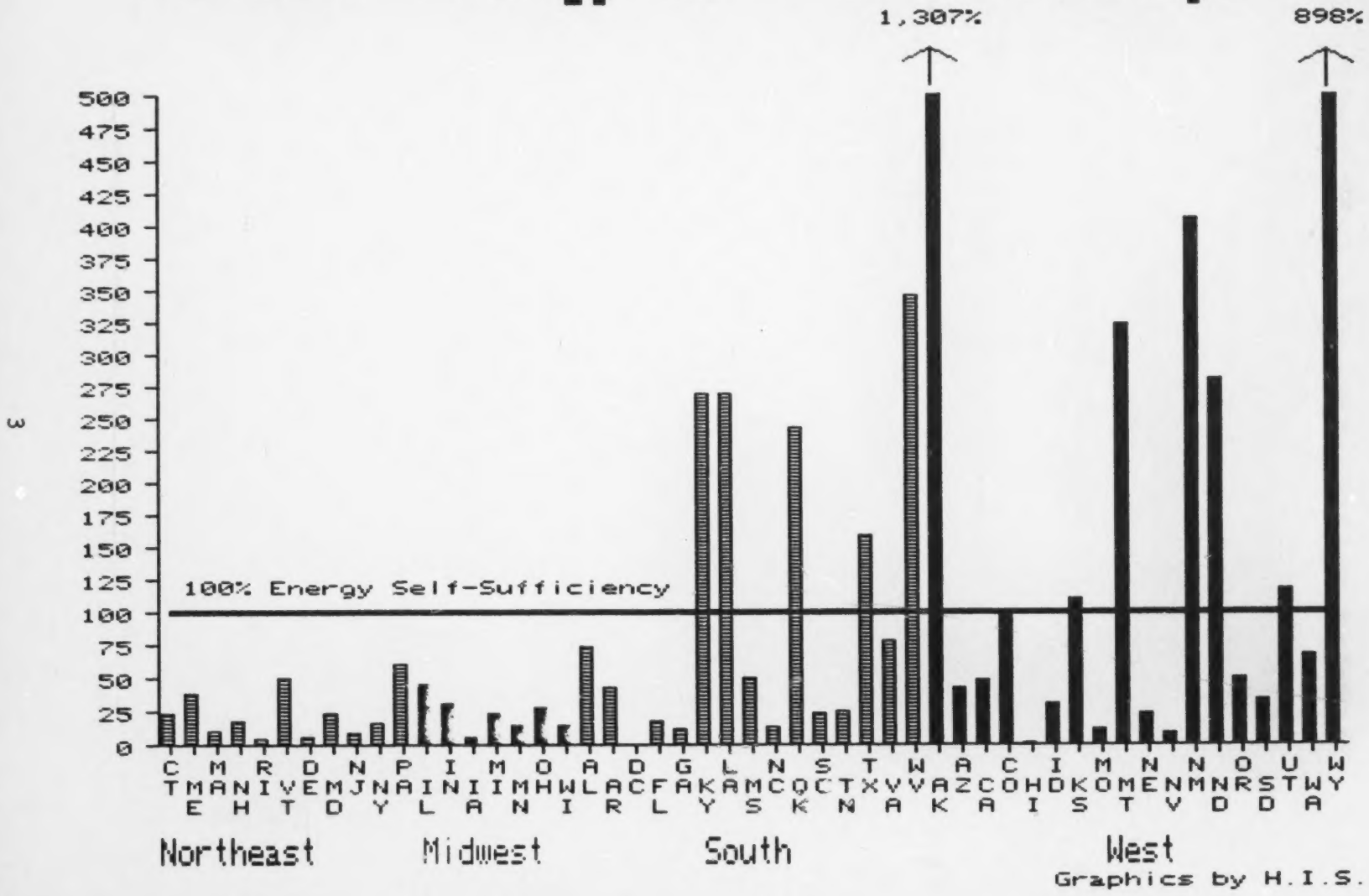


* 1981 and 1982 energy expenditures estimated by NE-MW Institute and Status Reports, Inc.

Graphics by H.I.S.

Chart 2

Percent Energy Self-Sufficiency, 1981



Graphics by H.I.S.

A comparison of total natural gas expenditures in 1981 with the value of natural gas production at the wellhead illustrates the drain of energy expenditures on state and local economies. In that year, the Northeast and Midwest paid $27 billion for natural gas, while natural gas production in the region was only $1 billion. In contrast, the South spent $25 billion, while its production was valued at $33 billion at the wellhead (see Chart 3).

The ultimate effect of this net dollar drain is a transfer of wealth from energy consuming states to energy producing states and countries. In 1981, the nation as a whole produced 88 percent of its energy needs, yet the remaining 12 percent supplied by imports cost $71 billion and resulted in a net U.S. trade deficit of $27 billion. The impact of higher energy prices on state economies has not been clearly determined. It is clear, however, that the rapid increase in oil prices during the 1970s and 1980s radically changed the balance of trade between sectors of the economy as well as regions, as illustrated in Chart 4:

- In 1970, 100 pounds of Iowa pork bought five barrels of oil. By 1980, the same quantity of pork was worth one barrel of industrial oil.

- In 1970, 100 pounds of Minnesota wheat flour bought one and one-third barrels of oil. By 1980, the same flour was worth less than a third of a barrel.

- In 1970, a half-ton of Pennsylvania scrap steel bought five barrels of oil. By 1980, the same steel was worth less than one barrel of oil.

Rising energy prices have had a substantial negative impact on the national economy since the oil embargo of 1973. The Department of Energy found that from 1973 to 1980, higher energy prices:

- reduced real gross national product by $25-55 billion annually between 1974 and 1978, up to $60 billion in 1979, and up to $95 billion in 1980;

- contributed an average annual increase of 1.9 to 2.6 percentage points to the Consumer Price Index and 1.5 to 2.0 percentage points to the gross national product price deflator; and

- resulted in employment losses estimated at 900,000 to 2.1 million.*

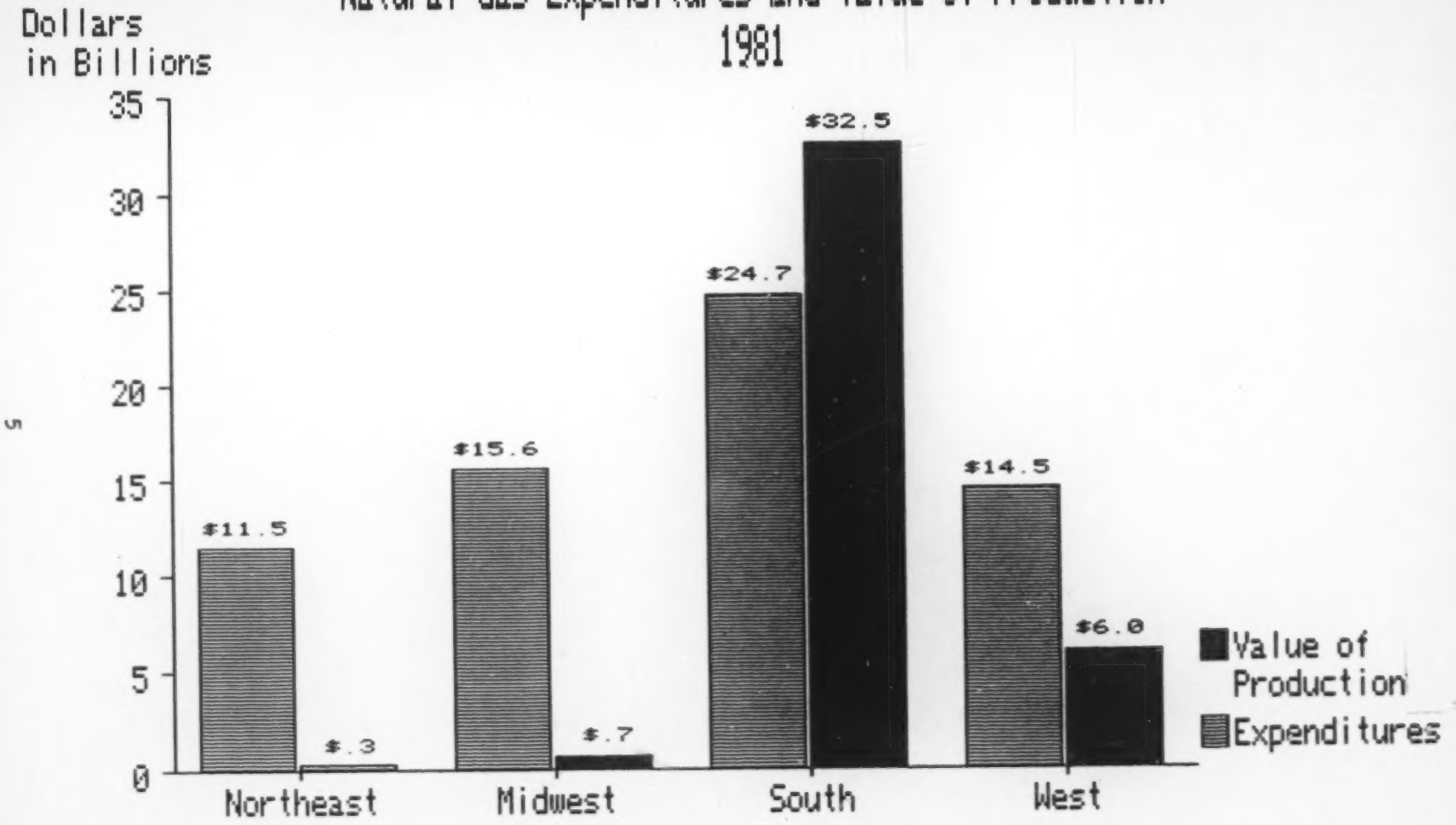
In terms of personal income and expenditures, increases in energy prices produced a relative reduction in the real income and wealth of households; inflation raised income into higher marginal tax brackets, further reducing real disposable income, and changes in the relative price of goods and services altered the mix of purchases by consumers. The loss of disposable income most

---

*Office of Policy, Planning and Analysis, U.S. Department of Energy, Interrelationship of Energy and the Economy, A Supplement to the National Energy Policy Plan (Washington, D.C., July 1981), p. 19.

Chart 3

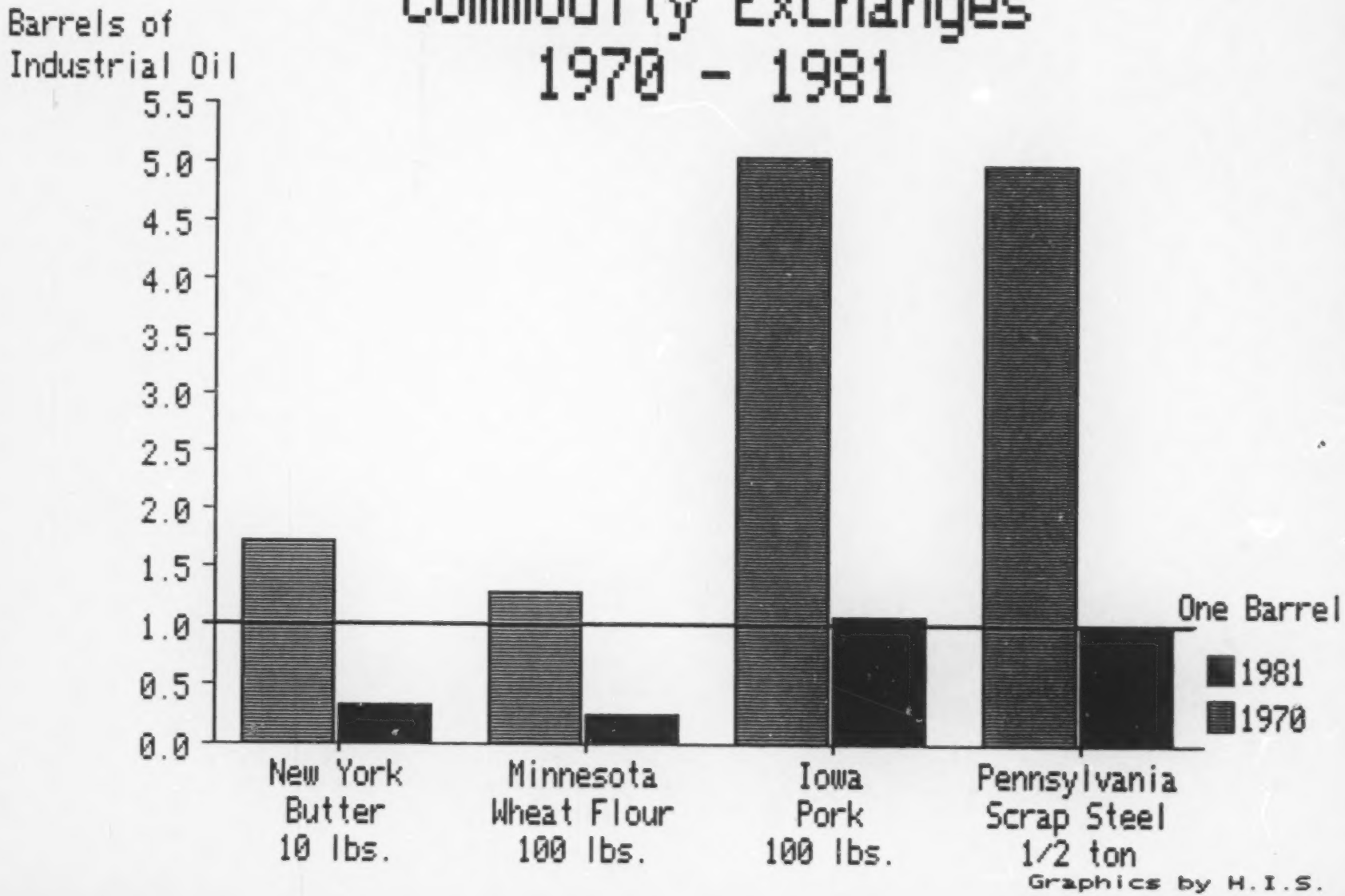
Natural Gas Expenditures and Value of Production
1981



Graphics by H.I.S.

Chart 4

Commodity Exchanges 1970 - 1981



clearly affected purchases of durable goods such as automobiles, appliances, and housing. In general, service categories of consumption were affected least by the price increases. In fact, energy prices accelerated the trend toward a more service-oriented U.S. economy.

Ten years after the oil embargo, the United States continues to be plagued by a price revolution that threatens to undercut efforts to recover from the devastating effects of the three recessions in the last decade. In the Northeast and Midwest, this problem is exacerbated by the lack of indigenous supplies of oil and gas and the resulting dollar drain to other states and nations. The higher percentage of earnings that now goes to energy bills inhibits the recovery of energy-poor economies by siphoning off capital that could be invested locally.

II. HOW TO USE THE STATE ENERGY FACTBOOK

The State Energy Factbook is designed to help members of Congress and public policy officials understand energy statistics from a national, regional, and state perspective. The Factbook documents energy expenditures, costs, and prices (1970 and 1980), production levels (1981), and consumption levels (1981). Data is provided in table form so that it can be read and understood easily. While no attempt was made to analyze all the complexities associated with the data, highlights have been included at the beginning of each section to point the reader to the most significant or unusual facts.

ENERGY EXPENDITURES, COSTS, AND PRICES

This section of the Factbook provides information on total state energy expenditures, household energy costs, and industrial prices. Table 1, TOTAL STATE ENERGY EXPENDITURES: 1970 AND 1980, shows the total amount of money spent on energy in each state during those years. A comparison of Table 1 with Table 8, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, shows the extent to which particular states and regions consume energy relative to how much they spend. For example, the Northeast accounted for 18.2 percent of total national energy consumption, and 21.2 percent of national expenditures. In contrast, the South accounted for 38.1 percent of national consumption, but only 35.7 percent of total U.S. expenditures.

To calculate other states' or regions' percentage of national expenditures, divide the particular state or regional expenditure figure by the U.S. total expenditure figure.

Table 2, AVERAGE HOUSEHOLD ENERGY COSTS: 1970 AND 1980, portrays each state's average home energy costs during 1970 and 1980.

Table 3, INDUSTRIAL ENERGY PRICES: 1980, shows average industrial energy prices for the five major fuels used in the industrial sector. Comparisons can be drawn for fuels within individual states. While it would be possible to present similar overviews of other sectors, the industrial sector was chosen because it has the greatest variance in fuel prices.

To approximate industrial energy costs for a particular state, use this table in conjunction with the table documenting the energy mix in the industrial sector for the state (Table 11, INDUSTRIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981). This will enable the reader to determine the extent to which each fuel is used in the industrial sector and the prices of those fuels.

ENERGY PRODUCTION

This section of the Factbook presents state energy production data and compares it with data for consumption and expenditures. Table 4, STATE ENERGY PRODUCTION BY SOURCE AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION: 1981, shows state production of major fuels in terms of the percentages they represent of national production of those same fuels. To find a particular state or region's production of a fuel, first identify the state or region needed and then match it with the fuel column desired.

Table 5, ENERGY SELF-SUFFICIENCY INDEX: 1981, shows each state's degree of self-sufficiency in energy. This estimate is based upon a state's total energy production relative to its total energy consumption. For example, Delaware -- which consumes much more energy than it produces -- is only 4.8 percent energy self-sufficient. In this table, electricity production from nuclear power plants is included in state energy production; uranium production is not included.

Table 6, NATURAL GAS OVERVIEW: 1981, compares natural gas expenditures, consumption, production, and value at the wellhead among states and regions. This table is useful for understanding the dollar drain on the economies of states like Massachusetts that have little or no production revenue and large natural gas expenditures. The table also identifies states like Louisiana that are receiving some of the financial benefits of natural gas production. While it would be possible to present a similar overview of coal and estimates for petroleum, natural gas was chosen because of recent congressional consideration of natural gas deregulation.

ENERGY CONSUMPTION

This section of the Factbook documents energy consumption patterns, by sector and state, for 1981 -- the latest year for which federal data is available. Energy consumption tables summarize the percentage of all major fuels consumed in all major sectors of the state's economy, including fuels used to generate electricity. They do not show the use of renewable energy resources such as solar energy, for which federal data is not available. To find a particular state or region's consumption of a fuel in Tables 7-14, first identify the state or region needed and then match it with the fuel column desired. Percentages in Tables 7-14 and 16-17 were calculated from EIA's raw data, which was reported in trillions/Btu.

Table 7, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, shows each state's dependence on various energy sources as a percentage of its total energy consumption. In 1981, for example, 21.9 percent of the energy used in Illinois came from coal, 29.8 percent from natural gas, 37 percent from petroleum, 8.8 percent from nuclear power, none from hydropower, and 1.9 percent from wood.

Table 8, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, shows the percentage of the nation's total fuel consumption used in each state. In 1981, for example, Alabama accounted for 3.9 percent of the nation's total coal consumption, 1.4 percent of the natural gas, 1.5 percent of the petroleum, 8.7 percent of the nuclear power, 2.0 percent of the hydropower,

and 3.0 percent of the wood consumption. Overall, Alabama used 2.0 percent of the energy consumed by the nation.

Tables 9-11, RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, show the amount of energy used by each sector within each state. (Please note that these tables exclude primary energy losses associated with the electricity actually sold to consumers in these sectors; roughly two-thirds of primary energy is lost in generation, transmission, and distribution. Table 18 details the percentage of energy losses relative to total state energy consumption. See the glossary section for an explanation of the energy uses in each sector: Residential, Commercial, Industrial, Utility, and Transportation.) In 1981, for example, of all the energy consumed by the residential sector in Arizona, none was from coal, 40.6 percent was from natural gas, 3.5 percent was from petroleum, 7.0 percent was from wood, and 48.9 percent was from electricity.

Tables 12-14 in this section, RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, show the amount of energy used in each sector as a percentage of total national energy consumption. In 1981, for example, of all the energy consumed by the residential sector in the U.S., Arkansas used none of the coal, 0.9 percent of the natural gas, 0.4 percent of the petroleum, 1.2 percent of the wood, and 1.2 percent of the electricity. Overall, Arkansas used 0.9 percent of the residential sector energy consumed by the nation.

Table 15, TRANSPORTATION SECTOR ENERGY CONSUMPTION AS A PERCENTAGE OF NATIONAL TOTAL: 1981, compares each state's motor gasoline consumption as a percentage of national gasoline consumption to each state's respective percentage of U.S. population.

Tables 16 and 17, UTILITY ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE AND NATIONAL TOTAL: 1981, show the fuels used by a state's utilities to generate electricity for use or sale to all sectors. In 1981, for example, coal accounted for none of California's total utility energy consumption, natural gas for 47.3 percent, petroleum for 20.2 percent, hydroelectric power for 21.6 percent, nuclear power for 2.4 percent, and wood for none.

Table 18, ELECTRIC UTILITY SALES AND ENERGY LOSSES AS A PERCENTAGE OF TOTAL STATE ENERGY CONSUMPTION: 1981, compares electricity sales and losses of electricity experienced in its generation by utilities. Both are expressed as a percentage of total state energy consumption. This relationship is important because end-use consumption of electricity represents only about one-third of the total value of the primary energy consumed to produce electricity; the rest is lost in generation, transmission, and distribution. Electricity sales is the amount of electricity consumed by end users in each state.

Table 19, PERCENTAGE OF HOUSEHOLDS HEATING BY ENERGY SOURCE: 1980, provides information on the percentage of a state's households that heat with coal, gas (utility gas and bottled, tank, or LP gas), petroleum, wood, electricity, and other fuel sources or that use no fuel. This table can be used in conjunction with Table 9, RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, which shows energy consumption in the residential sector, to understand the differences between energy used solely for heating and energy consumed in the entire residential sector. For example, in Table 9, 0.2 percent of the total amount of energy consumed in Connecticut's

residential sector was from coal, 21.9 percent was from natural gas, 50.4 percent was from petroleum, 8.7 percent was from wood, and 18.8 percent was from electricity. This table should not be interpreted to mean that half (50.4 percent) of the homes in Connecticut heat with petroleum. Rather, as Table 19 points out, almost two-thirds (63.4 percent) of the homes in Connecticut were heated with petroleum in 1981. The differences between the two tables reflects the fact that electricity is used to a certain extent in all homes, irrespective of the household's primary energy source for heating. Households use electricity for appliances and cooling as well as heating.

III. HIGHLIGHTS AND TABLES

ENERGY EXPENDITURES, COSTS AND PRICES

Table 1, TOTAL STATE ENERGY EXPENDITURES: 1970 AND 1980, shows the formidable increase in total energy spending the U.S. experienced between 1970 and 1980. During that decade, U.S. energy spending rose from $84.6 billion to $390.7 billion -- an increase of 462 percent. In the same ten-year period, total national energy consumption rose only 12.1 percent.*

Table 2, AVERAGE HOUSEHOLD ENERGY COSTS: 1970 AND 1980, shows that average state home energy costs vary substantially between states, and this difference appears to be increasing. For example:

- Vermont ($1,278), Maine ($1,272), Connecticut ($1,255), and New Jersey ($1,223), had the highest average household energy costs in the nation in 1980. Washington ($512), California ($593), Hawaii ($604), Wyoming ($630), Oregon ($635), and New Mexico ($646) had the lowest.

- In 1980, households in the Northeast and Midwest spent an average of $1,019 for energy, compared to the South and West, where the average was only $759.

Households in the Midwest with vehicles had the highest average household motor gasoline cost in 1980 -- $1,328. This compared to $1,177 in most Northeastern states, which generally had the lowest costs in the nation. However, these figures do not reflect the cost of public transportation.

Table 3, INDUSTRIAL ENERGY PRICES: 1980, presents the variations in the prices of different industrial-sector fuels. In 1980, for example, Massachusetts's industrial energy prices ranged from $2.12 per million Btu for coal to $17.57 per million Btu for electricity.

Prices for each fuel in the industrial sector also differed from state to state. In 1981, for example:

- natural gas cost $4.93 per million Btu in Vermont and only $1.22 per million Btu in Louisiana. The U.S. average for industrial-sector natural gas was $2.36.

- electricity cost $18.62 per million Btu in Rhode Island and only $2.25 in Washington. The U.S. average for industrial-sector electricity was $10.81.

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*Energy Information Administration, U.S. Department of Energy, State Energy Data Report Supplement, 1960 through 1981 (Washington, D.C., June 1983), pp. 4, 14.

TABLE 1

TOTAL STATE ENERGY EXPENDITURES: 1970 AND 1980
(in billions of dollars)

Region and State	1970	1980
NEW ENGLAND		
Connecticut	1.165	4.742
Maine	0.429	1.807
Massachusetts	2.288	8.206
New Hampshire	0.311	1.322
Rhode Island	0.351	1.267
Vermont	0.198	0.735
Regional Total	4.742	18.079
MID-ATLANTIC		
Delaware	0.274	1.357
Maryland	1.520	6.449
New Jersey	3.103	13.586
New York	6.412	23.834
Pennsylvania	4.891	19.470
Regional Total	16.200	64.696
MIDWEST		
Illinois	4.971	19.757
Indiana	2.640	10.736
Iowa	1.263	4.937
Michigan	3.722	14.265
Minnesota	1.662	6.141
Ohio	4.716	18.213
Wisconsin	1.816	6.866
Regional Total	20.790	80.915
SOUTH		
Alabama	1.426	7.132
Arkansas	0.815	4.028
District of Columbia	0.292	0.832
Florida	2.605	14.843
Georgia	1.736	8.848
Kentucky	1.296	6.203
Louisiana	2.005	13.536
Mississippi	0.875	4.249
North Carolina	1.907	8.375
Oklahoma	1.139	5.829
South Carolina	0.967	4.693
Tennessee	1.487	7.716
Texas	5.933	41.624
Virginia	1.730	8.397
West Virginia	0.751	3.298
Regional Total	24.964	139.603

TABLE 1 (continued)

TOTAL STATE ENERGY EXPENDITURES: 1970 AND 1980
(in billions of dollars)

Region and State	1970	1980
WEST		
Alaska	0.193	1.122
Arizona	0.750	4.213
California	7.244	37.867
Colorado	0.878	4.267
Hawaii	0.296	1.780
Idaho	0.343	1.489
Kansas	0.985	4.921
Missouri	1.935	7.593
Montana	0.350	1.459
Nebraska	0.676	2.487
Nevada	0.274	1.684
New Mexico	0.480	2.374
North Dakota	0.300	1.298
Oregon	0.868	3.976
South Dakota	0.312	1.122
Utah	0.450	2.259
Washington	1.278	5.888
Wyoming	0.250	1.562
Regional Total	17.862	87.361
NORTHEAST	20.942	82.775
MIDWEST	20.790	80.915
NORTHEAST AND MIDWEST	41.732	163.690
SOUTH	24.964	139.603
WEST	17.862	87.361
SOUTH AND WEST	42.826	226.964
U.S. TOTAL	84.558	390.654

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, Energy Prices and Expenditures Data Report: 1970-1980 (Washington, D.C., May 1983), Tables: "Fuel Expenditures and Electricity Sales by Fuel Type: 1970-1980."

TABLE 2

AVERAGE HOUSEHOLD ENERGY COSTS: 1970 AND 1980
(in dollars)

Region and State	1970	1980	Average Motor Gasoline Costs[1] 1980
NEW ENGLAND			
Connecticut	373	1,255	1,177
Maine	441	1,272	1,177
Massachusetts	442	1,174	1,177
New Hampshire	489	1,196	1,177
Rhode Island	406	1,098	1,177
Vermont	528	1,278	1,177
Regional Average	427	1,203	
MID-ATLANTIC			
Delaware	395	1,161	1,285
Maryland	311	963	1,285
New Jersey	393	1,223	1,177
New York	307	933	1,177
Pennsylvania	331	1,039	1,177
Regional Average	330	1,019	
MIDWEST			
Illinois	354	985	1,328
Indiana	367	965	1,328
Iowa	371	1,011	1,328
Michigan	353	971	1,328
Minnesota	391	867	1,328
Ohio	326	979	1,328
Wisconsin	377	992	1,328
Regional Average	355	971	
SOUTH			
Alabama	282	848	1,285
Arkansas	321	911	1,285
District of Columbia	279	903	1,285
Florida	276	793	1,285
Georgia	258	762	1,285
Kentucky	271	796	1,285
Louisiana	282	737	1,285
Mississippi	307	863	1,285
North Carolina	317	856	1,285
Oklahoma	337	800	1,285
South Carolina	300	810	1,285
Tennessee	237	751	1,285
Texas	295	818	1,285
Virginia	317	985	1,285
West Virginia	246	808	1,285
Regional Average	288	821	

TABLE 2 (continued)

AVERAGE HOUSEHOLD ENERGY COSTS: 1970 AND 1980
(in dollars)

Region and State	1970	1980	Average Motor Gasoline Costs[1] 1980
WEST			
Alaska	483	890	--[2]
Arizona	270	779	1,266
California	209	593	1,266
Colorado	272	692	1,266
Hawaii	204	604	--[2]
Idaho	285	696	1,266
Kansas	316	810	1,328
Missouri	321	961	1,328
Montana	306	696	1,266
Nebraska	354	816	1,266
Nevada	301	839	1,328
New Mexico	281	646	1,266
North Dakota	362	991	1,328
Oregon	267	635	1,266
South Dakota	385	958	1,328
Utah	294	789	1,266
Washington	247	512	1,266
Wyoming	348	630	1,266
Regional Average	256	679	
NORTHEAST	351	1,061	
MIDWEST	355	971	
NORTHEAST AND MIDWEST	353	1,019	
SOUTH	288	821	
WEST	256	679	
SOUTH AND WEST	274	759	
U.S. WEIGHTED AVERAGE	313	876	1,271

[1]Average household motor gasoline costs by U.S. census regions. Please note these figures do not include public transportation costs.
[2]The computation of average household gasoline costs did not include Alaska or Hawaii.

SOURCES: Bureau of the Census, U.S. Department of Commerce, Statistical Abstract of the United States: 1981 (Washington, D.C., December 1981), 102nd Edition, Table 63, p. 44; Bureau of the Census, U.S. Department of Commerce, Office of Housing, Provisional Estimates of Social, Economic, and Housing Characteristics, 1980 Census of Population and Housing (Washington, D.C., March 1982); Energy Information Administration, U.S. Department of Energy, Energy Prices and Expenditures Data Report, 1970-1980 (Washington, D.C., May 1983), Table 5: "Fuel Expenditures by End-Use Sector and Electric Utilities"; motor gasoline expenditures based on calculations from Energy Information Administration, U.S. Department of Energy, Residential Energy Consumption Survey: Consumption Patterns of Household Vehicles, June 1979 to December 1980 (Washington, D.C., April 1982), p. 22.

TABLE 3

INDUSTRIAL ENERGY PRICES: 1980
(in $/million Btu)

Region and State	Coal	Natural Gas	Distillate Fuel	Residual Fuel	Electricity
NEW ENGLAND					
Connecticut	1.80	4.08	6.27	4.85	16.43
Maine	2.14	4.19	6.22	4.01	13.23
Massachusetts	2.12	4.09	6.30	3.94	17.57
New Hampshire	2.07	2.00	6.10	3.96	15.96
Rhode Island	2.12	4.45	6.22	4.74	18.62
Vermont	2.06	4.93	6.46	4.32	10.51
MID-ATLANTIC					
Delaware	1.58	2.71	5.93	4.41	14.69
Maryland	1.13	3.19	6.28	4.74	11.78
New Jersey	1.82	3.81	6.25	5.12	17.16
New York	1.59	3.42	6.79	4.57	12.22
Pennsylvania	1.24	3.00	6.23	4.76	12.98
MIDWEST					
Illinois	1.46	3.10	6.29	3.90	11.97
Indiana	1.35	2.63	6.03	3.48	10.99
Iowa	1.32	2.51	5.93	3.62	10.32
Michigan	1.68	2.87	6.14	3.27	13.30
Minnesota	1.14	2.51	6.41	3.05	11.05
Ohio	1.20	3.00	6.38	3.48	9.88
Wisconsin	1.75	3.05	6.16	3.65	10.04
SOUTH					
Alabama	1.59	2.43	6.02	3.61	10.42
Arkansas	1.56	2.20	5.64	3.39	9.12
District of Columbia	1.55	2.45	6.97	5.87	11.78
Florida	1.56	2.60	6.24	3.45	13.61
Georgia	1.50	2.75	6.39	3.62	10.67
Kentucky	1.56	2.64	6.77	3.99	8.67
Louisiana	1.23	1.22	5.24	3.42	9.05
Mississippi	1.39	2.58	6.00	3.36	11.46
North Carolina	1.63	2.73	6.10	4.10	9.02
Oklahoma	1.16	1.82	6.18	4.63	8.83
South Carolina	1.55	2.89	6.12	3.86	8.61
Tennessee	1.29	2.54	6.54	3.61	9.81
Texas	0.56	2.04	6.13	3.23	9.97
Virginia	1.33	2.98	5.96	3.86	12.22
West Virginia	1.29	2.94	6.31	4.08	8.67

TABLE 3 (continued)

INDUSTRIAL ENERGY PRICES: 1980
(in $/million Btu)

Region and State	Coal	Natural Gas	Distillate Fuel	Residual Fuel	Electricity
WEST					
Alaska	1.10	0.45	7.63	3.66	10.83
Arizona	1.26	2.56	5.92	3.71	11.52
California	1.50	3.41	6.01	3.46	15.73
Colorado	0.93	2.57	5.42	2.82	9.66
Hawaii	0.00	0.00	6.00	4.00	18.84
Idaho	1.16	3.58	6.54	4.19	5.51
Kansas	1.10	2.63	5.73	3.44	10.54
Missouri	1.34	2.62	6.08	3.50	11.14
Montana	1.50	2.62	6.10	3.43	3.01
Nebraska	1.21	2.26	5.82	3.65	8.04
Nevada	1.35	2.81	6.53	4.22	11.75
New Mexico	1.26	1.90	7.32	4.22	13.61
North Dakota	0.87	3.19	6.94	3.06	9.88
Oregon	1.41	4.21	6.29	3.66	4.69
South Dakota	1.09	2.35	6.89	3.25	9.28
Utah	0.92	1.94	5.96	2.97	10.04
Washington	1.88	4.09	5.93	3.50	2.25
Wyoming	0.94	2.03	7.09	3.43	5.19
U.S. AVERAGE	1.35	2.36	6.21	3.90	10.81

SOURCE: Staff calculations from Energy Information Administration, U.S. Department of Energy, Energy Prices and Expenditures Data Report: 1970-1980 (Washington, D.C., May 1983), Tables: "Annual Fuel Prices by End-Use Sector."

ENERGY PRODUCTION

Table 4, STATE ENERGY PRODUCTION BY SOURCE AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION: 1981, shows the great differences in energy resources among states and regions. In 1981, for example, Texas produced 4 percent of the coal, 34.6 percent of the natural gas, 30.2 percent of the petroleum, 22.5 percent of the uranium, 0.4 percent of the hydroelectric power, and 3.4 percent of the wood in the U.S. In contrast, Delaware produced no conventional energy except wood, of which it produced 0.4 percent.

Regional totals further dramatize the differences between energy dependent and energy producing regions:

- the South and West produced 74.9 percent of the coal, 97.8 percent of the natural gas, 97.5 percent of the petroleum, 100 percent of the uranium, 85 percent of the hydroelectric power, and 59.9 percent of the wood in the nation;

- the Northeast and Midwest, in contrast, produced only 25.1 percent of the coal, 2.2 percent of the natural gas, 2.5 percent of the petroleum, none of the uranium, 15 percent of the hydroelectric power, and 40.1 percent of the wood in the U.S.

Table 5, ENERGY SELF-SUFFICIENCY INDEX: 1981, reveals considerable state and regional differences in energy self-sufficiency.

- The South and West have the states with the highest self-sufficiency percentages, including: Alaska (1,307.8 percent), Wyoming (898.1 percent), New Mexico (406.3 percent), West Virginia (345.8 percent), and Montana (322.5 percent).

- States in the Northeast and Midwest have the lowest self-sufficiency percentages, including: Delaware (4.8 percent), Iowa (6.1 percent), New Jersey (8.3 percent), and Massachusetts (9.7 percent).

- Overall, the U.S. produced 87.7 percent of the amount of energy it consumed.

Table 6, NATURAL GAS OVERVIEW: 1981, contrasts expenditures, consumption, and production for states and regions. In 1981, for example:

- Texas spent $10.8 billion on natural gas, and accounted for 20.24 percent of the nation's consumption. The state produced 34.62 percent of the nation's natural gas, which generated $12.91 billion in revenue at the wellhead.

- Seven Midwestern states spent $15.05 billion, and consumed 20.99 percent of the nation's natural gas. These states accounted for only 1.48 percent of the nation's production, worth $747 million in revenue at the wellhead.

TABLE 4

STATE ENERGY PRODUCTION BY SOURCE
AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION: 1981

Region and State	Coal	Natural Gas	Petroleum	Uranium	Hydroelectric Power	Wood
NEW ENGLAND						
Connecticut	0.0	0.0	0.0	0.0	0.1	1.2
Maine	0.0	0.0	0.0	0.0	1.1	2.1
Massachusetts	0.0	0.0	0.0	0.0	0.2	3.2
New Hampshire	0.0	0.0	0.0	0.0	0.5	1.0
Rhode Island	0.0	0.0	0.0	0.0	0.0	0.3
Vermont	0.0	0.0	0.0	0.0	0.4	0.6
Regional Total	0.0	0.0	0.0	0.0	2.2	8.5
MID-ATLANTIC						
Delaware	0.0	0.0	0.0	0.0	0.0	0.4
Maryland	0.5	0.0	0.0	0.0	0.5	2.1
New Jersey	0.0	0.0	0.0	0.0	(0.1)[1]	2.3
New York	0.0	0.1	0.0	0.0	9.8	4.5
Pennsylvania	10.2	0.6	0.1	0.0	0.2	4.7
Regional Total	10.7	0.7	0.1	0.0	10.5	14.0
MIDWEST						
Illinois	6.4	0.0	0.8	0.0	0.1	3.1
Indiana	3.6	0.0	0.2	0.0	0.2	2.3
Iowa	0.1	0.0	0.0	0.0	0.4	0.4
Michigan	0.0	0.8	1.0	0.0	0.5	2.9
Minnesota	0.0	0.0	0.0	0.0	0.4	2.1
Ohio	4.4	0.7	0.4	0.0	0.0	3.7
Wisconsin	0.0	0.0	0.0	0.0	0.8	3.2
Regional Total	14.4	1.5	2.4	0.0	2.3	17.7
SOUTH						
Alabama	3.0	0.4	0.7	0.0	2.3	3.0
Arkansas	0.0	0.5	0.6	0.0	0.5	2.0
D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Florida	0.0	0.2	1.1	0.0	0.1	3.0
Georgia	0.0	0.0	0.0	0.0	0.9	4.6
Kentucky	19.0	0.3	0.2	0.0	1.0	2.1
Louisiana	0.0	34.0	14.4	0.0	0.0	2.0
Mississippi	0.0	0.9	1.1	0.0	0.0	1.6
North Carolina	0.0	0.0	0.0	0.0	1.1	5.3
Oklahoma	0.7	10.1	4.9	0.0	0.4	1.1
South Carolina	0.0	0.0	0.0	0.0	0.5	2.3
Tennessee	1.2	0.0	0.0	0.0	2.2	3.9
Texas	4.0	34.6	30.2	22.5	0.4	3.4
Virginia	5.0	0.0	*	0.0	0.1	3.9
West Virginia	13.8	0.8	0.1	0.0	0.4	1.1
Regional Total	46.7	81.8	53.3	22.5	9.9	39.4

TABLE 4 (continued)

STATE ENERGY PRODUCTION BY SOURCE
AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION: 1981

Region and State	Coal	Natural Gas	Petroleum	Uranium	Hydroelectric Power	Wood
WEST						
Alaska	0.1	1.2	18.8	0.0	0.2	0.3
Arizona	1.4	0.0	0.0	0.0	2.6	0.4
California	0.0	1.9	12.3	0.0	11.3	7.4
Colorado	2.4	1.0	1.0	0.0	0.5	0.8
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0
Idaho	0.0	0.0	0.0	0.0	3.6	0.8
Kansas	0.2	3.2	2.1	0.0	0.0	0.4
Missouri	0.6	0.0	0.0	0.0	0.3	2.1
Montana	4.1	0.3	1.0	0.0	4.3	0.5
Nebraska	0.0	0.0	0.2	0.0	0.5	0.2
Nevada	0.0	0.0	0.0	0.0	0.7	0.1
New Mexico	2.3	5.7	2.3	46.5	0.0	0.4
North Dakota	2.2	0.2	1.5	0.0	0.9	0.0
Oregon	0.0	0.0	0.0	0.0	12.2	3.2
South Dakota	0.0	0.0	0.0	0.0	2.0	0.1
Utah	1.7	0.5	0.8	0.0	0.2	0.2
Washington	0.6	0.0	0.0	0.0	35.5	3.4
Wyoming	12.6	2.1	4.2	31.0	0.3	0.1
Regional Total	28.2	16.0	44.2	77.5	75.1	20.4
NORTHEAST	10.7	0.7	0.1	0.0	12.8	22.5
MIDWEST	14.4	1.5	2.4	0.0	2.3	17.7
NORTHEAST AND MIDWEST	25.1	2.2	2.5	0.0	15.0	40.1
SOUTH	46.7	81.8	53.3	22.5	9.9	39.4
WEST	28.2	16.0	44.2	77.5	75.1	20.4
SOUTH AND WEST	74.9	97.8	97.5	100.0	85.0	59.9
U.S. TOTAL[2]	100.0	100.0	100.0	100.0	100.0	100.0

[1]Represents pumped storage during peak periods resulting in net consumption rather than production of energy.
[2]Percentages may not total 100.0 due to rounding.
*Indicates values of less than 0.05 percent but greater than zero.

SOURCES: For coal: Energy Information Administration, U.S. Department of Energy, Coal Production - 1981 (Washington, D.C., December 1982), p. 14, table 6; for natural gas: Energy Information Administration, U.S. Department of Energy, Natural Gas Annual - 1981 (Washington, D.C., September 1982), p. 16, table 7; for petroleum: Energy Information Administration, U.S. Department of Energy, Petroleum Supply Annual - 1981, Vol. I (Washington, D.C., July 1982); for uranium: U.S. Department of Energy, Grand Junction, Colorado, Office, Statistical Data of the Uranium Industry (Grand Junction, Colorado, January 1982), p. 18, table I-8; for hydroelectric power: Energy Information Administration, U.S. Department of Energy, Electric Power Annual (Washington, D.C., November 1982), p. 44, table 32; for wood: based on estimates from Energy Information Administration, U.S. Department of Energy, Estimates of U.S. Wood Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 93-94.

TABLE 5

ENERGY SELF-SUFFICIENCY INDEX: 1981

Region and State	Total Production (trillion Btu)	Total Consumption (trillion Btu)	Percentage of Energy Self-Sufficiency
NEW ENGLAND			
Connecticut	168.1	708.8	23.7
Maine	134.6	352.7	38.1
Massachusetts	124.3	1,276.6	9.7
New Hampshire	35.8	207.8	17.2
Rhode Island	7.6	186.7	4.1
Vermont	62.5	124.8	50.1
Regional Total or Average	532.8	2,857.4	18.6
MID-ATLANTIC			
Delaware	9.6	201.2	4.8
Maryland	283.5	1,179.1	24.0
New Jersey	175.3	2,112.8	8.3
New York	580.6	3,695.6	15.7
Pennsylvania	2,269.7	3,814.2	59.5
Regional Total or Average	3,318.8	11,002.9	30.2
MIDWEST			
Illinois	1,693.6	3,656.7	46.3
Indiana	735.2	2,402.3	30.6
Iowa	59.8	983.7	6.1
Michigan	608.6	2,654.2	22.9
Minnesota	167.1	1,240.9	13.5
Ohio	1,151.7	4,080.0	28.2
Wisconsin	200.0	1,362.9	14.7
Regional Total or Average	4,616.0	16,380.6	28.2
SOUTH			
Alabama	1,134.3	1,543.4	73.5
Arkansas	363.1	848.7	42.8
District of Columbia	0.3	150.4	0.2
Florida	461.7	2,546.0	18.1
Georgia	206.8	1,737.1	11.9
Kentucky	3,637.4	1,350.8	269.3
Louisiana	9,533.3	3,546.8	268.8
Mississippi	418.7	834.1	50.2
North Carolina	217.9	1,737.0	12.5
Oklahoma	3,108.3	1,282.0	242.5
South Carolina	252.6	1,035.9	24.4
Tennessee	423.3	1,721.5	24.6
Texas	13,318.5	8,374.8	159.0
Virginia	1,202.0	1,562.2	76.9
West Virginia	2,731.1	789.7	345.8
Regional Total or Average	37,009.2	29,060.5	127.4

TABLE 5 (continued)

ENERGY SELF-SUFFICIENCY INDEX: 1981

Region and State	Total Production (trillion Btu)	Total Consumption (trillion Btu)	Percentage of Energy Self-Sufficiency
WEST			
Alaska	3,683.4	281.6	1,307.8
Arizona	340.6	799.0	42.6
California	3,128.7	6,377.0	49.1
Colorado	859.1	860.9	99.8
Hawaii	1.1	237.3	0.5
Idaho	117.3	380.4	30.8
Kansas	1,069.9	972.5	110.0
Missouri	165.0	1,420.3	11.6
Montana	1,116.8	346.3	322.5
Nebraska	122.8	509.5	24.1
Nevada	24.2	290.6	8.3
New Mexico	1,995.1	491.0	406.3
North Dakota	736.2	262.6	280.4
Oregon	475.0	942.3	50.4
South Dakota	63.7	194.9	32.7
Utah	561.3	476.8	117.7
Washington	1,175.0	1,729.8	67.9
Wyoming	3,490.4	388.7	898.1
Regional Total or Average	19,125.6	16,961.5	112.8
NORTHEAST	3,851.6	13,860.4	27.8
MIDWEST	4,616.0	16,380.6	28.2
NORTHEAST AND MIDWEST	8,467.6	30,241.0	28.0
SOUTH	37,009.2	29,060.5	127.4
WEST	19,125.6	19,961.5	112.8
SOUTH AND WEST	56,134.8	46,022.0	122.0
U.S. TOTAL OR AVERAGE	66,909.4	76,263.0	87.7[1]

[1]This percentage self-sufficiency index for the United States includes the addition of 2,307.0 trillion Btu of natural gas plant liquids, which could not be distributed at the state level.

SOURCES: Staff calculations from: Energy Information Administration, U.S. Department of Energy, Coal Production - 1981 (Washington, D.C., December 1982), p. 14, table 6; Natural Gas Annual - 1981 (Washington, D.C., September 1982), p. 16, table 7; Petroleum Supply Annual - 1981, Vol. I (Washington, D.C., July 1982); Electric Power Annual - 1981, Vol. I (Washington, D.C., November 1982), p. 44, table 32; State Energy Data Report 1960 - 1981 (Washington, D.C., June 1983), p. 3 (Note: All consumption data, except wood, is derived from this source, including nuclear power consumption, which was used in the production totals); Estimates of Wood Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 93-94.

TABLE 6

NATURAL GAS OVERVIEW: 1981

Region and State	Expenditures (in millions of dollars)	Consumption as a Percentage of National Total	Production as a Percentage of National total	Value of Production at Wellhead (in millions of dollars)
NEW ENGLAND				
Connecticut	461.2	.40	0.00	0.0
Maine	14.4	.01	0.00	0.0
Massachusetts	1,085.5	.95	0.00	0.0
New Hampshire	53.8	.05	0.00	0.0
Rhode Island	172.2	.15	0.00	0.0
Vermont	27.3	.02	0.00	0.0
Regional Total	1,814.3	1.58	0.00	0.0
MID-ATLANTIC				
Delaware	134.6	.16	0.00	0.0
Maryland	779.8	.90	.00*	0.0*
New Jersey	2,018.8	2.01	0.00	0.0
New York	3,606.8	3.92	.08	42.9
Pennsylvania	3,153.3	4.04	.61	285.3
Regional Total	9,693.3	11.03	.69	328.2
MIDWEST				
Illinois	4,057.5	5.47	.01	3.2
Indiana	1,616.2	2.56	.00*	0.7
Iowa	852.2	1.31	0.00	0.0
Michigan	2,967.1	4.13	.76	436.9
Minnesota	972.8	1.37	0.00	0.0
Ohio	3,216.7	4.49	.71	306.3
Wisconsin	1,368.3	1.67	0.00	0.0
Regional Total	15,050.8	20.99	1.48	747.1
SOUTH				
Alabama	945.5	1.40	.40	378.0
Arkansas	736.2	1.36	.47	168.3
D.C.	153.1	.15	0.00	0.0
Florida	900.7	1.74	.16	88.0
Georgia	1,236.3	1.63	0.00	0.0
Kentucky	637.6	1.03	.31	61.8
Louisiana	3,945.5	9.18	33.97	14,035.0
Mississippi	732.3	1.25	.91	581.8
North Carolina	697.0	.79	0.00	0.0
Oklahoma	1,523.1	3.46	10.12	3,805.4
South Carolina	562.1	.73	0.00	0.0
Tennessee	717.3	1.15	.01	4.4
Texas	10,797.9	20.24	34.62	12,907.7
Virginia	612.0	.78	.04	19.1
West Virginia	550.3	.77	.81	483.8
Regional Total	24,746.8	45.66	81.80	32,533.3

TABLE 6 (continued)

NATURAL GAS OVERVIEW: 1981

Region and State	Expenditures (in millions of dollars)	Consumption as a Percentage of National Total	Production as a Percentage of National total	Value of Production at Wellhead (in millions of dollars)
WEST				
Alaska	90.0	.63	1.22	150.4
Arizona	581.6	.94	.00*	.0
California	7,462.4	9.58	1.91	978.5
Colorado	788.6	1.09	.98	385.5
Hawaii	43.8	.01	0.00	0.0
Idaho	195.4	.23	0.00	0.0
Kansas	1,126.2	2.21	3.21	588.9
Missouri	1,038.8	1.46	0.00	0.0
Montana	202.9	.27	.28	108.0
Nebraska	413.0	.71	.01	3.7
Nevada	278.1	.38	0.00	0.0
New Mexico	557.0	1.01	5.68	2,415.0
North Dakota	107.7	.18	.21	82.7
Oregon	386.5	.39	.00*	.0*
South Dakota	78.4	.11	.01	3.2
Utah	298.9	.53	.46	100.3
Washington	635.0	.64	0.00	0.0
Wyoming	194.4	.36	2.06	1,137.1
Regional Total	14,478.5	20.73	16.02	5,953.3
NORTHEAST	11,507.6	12.62	.69	328.2
MIDWEST	15,050.8	20.99	1.48	747.1
NORTHEAST AND MIDWEST	26,558.4	33.61	2.17	1,075.3
SOUTH	24,746.8	45.66	81.80	32,533.3
WEST	14,478.5	20.73	16.02	5,953.3
SOUTH AND WEST	39,225.3	66.39	97.83	38,486.6
U.S. TOTAL	65,783.7	100.00	100.00	39,561.9

*Production levels in these states were so small that they rounded to zero.

SOURCE: Staff calculations from Energy Information Administration, U.S. Department of Energy, Natural Gas Annual - 1981 (Washington, D.C., September 1982), pp. 28, 16.

ENERGY CONSUMPTION

Table 7, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981 shows the substantial variation in fuel use among states.

- Hawaii, Massachusetts, and Delaware had the highest percentage of petroleum consumption with 98.3, 68.9, and 68.1 percent, respectively. West Virginia had the lowest use of petroleum, 26.3 percent.

- Nuclear power provided 31.2 percent of Vermont's energy, compared to the national average of 3.9 percent. Many states, particularly in the West, used none.

- Washington used hydroelectricity for 61.2 percent of its energy needs, compared to the national average of 4 percent.

Table 8, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, illustrates the state and regional differences in fuel consumption. In 1981, for example:

- Northeastern and Midwestern states consumed 56.4 percent of the nation's nuclear power;

- states in the West consumed 71 percent of the hydropower, while the Midwest consumed only 3.5 percent.

Table 9, RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, shows the extensive use of natural gas in the residential sector in most states as compared to other fuels. Overall, natural gas accounted for 48.7 percent of the energy used in the residential sector. All regions except the South, which relied more on electricity, consumed more natural gas than any other fuel. Illinois (74.7 percent) and Utah (74.1 percent) led all states in residential-sector natural gas consumption.

Table 10, COMMERCIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, shows that natural gas also was the dominant fuel in the commercial sector in all regions except the South.

- Midwestern states used natural gas for 61 percent of their commercial energy needs, compared to the national average of 44.3 percent.

- Delaware (65.2 percent) and Maine (63.3 percent) relied most on petroleum for commercial energy. This compares to the U.S. average of 18.7 percent.

Table 11, INDUSTRIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, shows that in most states the industrial sector relied more on coal and petroleum than did the residential or commercial sectors. For example, the U.S. total state average use of coal in the residential sector was 0.8 percent, while in the industrial sector it was 13.3 percent.

- New England states consumed a higher percentage of petroleum (48.9 percent) in the industrial sector than the national average (34.6 percent). The states with the greatest use of industrial petroleum were Hawaii (74.9 percent), South Dakota (72.9 percent), New Jersey (65 percent), North Dakota (63.6 percent), and Rhode Island (60.5 percent).

- New England states used wood for 22.6 percent of their industrial needs, compared to the national industrial-sector average of 5.8 percent.

Table 12, RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, depicts the reliance of residences in the Northeast and Midwest on coal, natural gas, and petroleum. On the other hand, the South and West used a higher percentage of the nation's residential wood energy and electricity.

- Northeastern and Midwestern states used 68.3 percent of the nation's residential-sector coal, compared to the 31.7 percent for the South and West. Pennsylvania alone accounted for 32.3 percent of the U.S. residential coal consumption.

- New England states consumed 18 percent of the residential-sector petroleum, even though these states used only 6.2 percent of total national residential energy. Overall, the Northeast and Midwest consumed 74.4 percent of the residential-sector petroleum.

Table 13, COMMERCIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, displays a regional breakdown of consumption in the commercial sector similar to that in the residential sector.

- The Northeast and Midwest consumed 59.6 percent of total U.S. commercial coal, even though the regions accounted for only 47.3 percent of total commercial energy consumption.

- The South and West used 52.5 percent of the wood and 61.2 percent of the electricity in the commercial sector.

Table 14, INDUSTRIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, shows the South and West dominating the consumption of all fuels except coal and industrial hydroelectric power, which are used mostly in the Northeast and Midwest. Overall, the South and West used 63.5 percent of the industrial-sector energy.

- The Midwest alone used 40.6 percent of the nation's industrial coal, even though the region consumed only 22.3 percent of the nation's industrial energy.

- Texas and Louisiana together accounted for 28 percent of the nation's industrial petroleum consumption, in contrast to the Northeastern states, which together used only 15 percent.

Table 15, TRANSPORTATION SECTOR ENERGY CONSUMPTION AS A PERCENTAGE OF NATIONAL TOTAL: 1981, shows that most states used about the same share of motor gasoline as their percentage of total U.S. population. However, in the South and West, motor gasoline consumption was slightly higher than these states' percentage of total U.S. population.

Table 16, UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, shows that every region except the West used more coal than other fuels to generate electricity. The West used more hydroelectric power.

- The Midwest used coal for 79.5 percent of its utility-sector consumption. States with the greatest use of coal were: West Virginia (98.8 percent), Indiana (97.9 percent), Missouri and Wyoming (96.7 percent), Ohio (95.1 percent), Kentucky (94.9 percent), and Utah (91.8 percent).

- The West outpaced all regions in hydroelectric power use (37.8 percent) compared to the South (2.7 percent) and Midwest (2.1 percent). States that had the greatest dependence on hydroelectric power were Idaho (100 percent), Washington (91.1 percent), Oregon (78.7 percent), Montana (66.3 percent), and South Dakota (62.8 percent).

- The Northeast used nuclear power for 21.5 percent of the region's utility needs, compared to the West, which used 3.5 percent. States that relied most on nuclear power were Vermont (75.3 percent), Connecticut (54 percent), and Virginia (48 percent).

Table 17, UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, depicts the comparative reliance of utilities in states and regions on different energy sources to generate electricity. Utilities in the South and West together consumed 63.9 percent of the energy used to generate electricity. Coal, natural gas, and hydroelectric power were used to a greater extent in the South and West than in the Northeast and Midwest. On the other hand, petroleum, nuclear power, and wood were consumed in greater proportions in the Northeast and Midwest than in the rest of the country.

- The utility sector in the South and West consumed 92 percent of total U.S. utility natural gas. Texas alone consumed 37.9 percent of the natural gas used to generate electricity.

- The states that had the greatest percentages of total U.S. nuclear utility consumption were Illinois (10.8 percent), Alabama (8.7 percent), Virginia (6.5 percent), South Carolina (6.4 percent), New York (6.4 percent), and Michigan (6.3 percent).

Table 18, ELECTRIC UTILITY SALES AND ENERGY LOSSES AS A PERCENTAGE OF TOTAL STATE ENERGY CONSUMPTION: 1981, shows that in most states and regions, energy losses associated with the generation of electricity by utilities are 2.3 times the electricity sold to end-use consumers.

Table 19, PERCENTAGE OF HOUSEHOLDS HEATING BY ENERGY SOURCE: 1980, shows a substantial variation in the types of fuel used for home heating.

- States in the Northeast had the highest percentage of households heating with petroleum. Maine (71.1 percent) led the nation, followed by Connecticut (63.4 percent), Vermont (61.3 percent), and New Hampshire (60.5 percent).

- Vermont (17.3 percent), Maine (15.3 percent), and Oregon (12.7 percent) had the highest percentage of households using wood for heating. The national average was 3.2 percent.

- Mississippi (20.7 percent), Georgia (18.1 percent), South Dakota (16.7 ercent), Alabama (15.7 percent), and Arkansas (15.7 percent), were the states with the greatest reliance on bottled, tank, or LP gas.

TABLE 7

STATE ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Nuclear	Hydro	Wood	Electricity Imported (Exported) Across State Borders[1]	Total State Consumption[2]
NEW ENGLAND								
Connecticut	0.1	11.1	64.7	19.5	0.4	3.8	.4	100.0
Maine	1.0	0.7	61.6	16.1	17.3	13.6	(10.3)	100.0
Massachusetts	2.1	14.8	68.9	3.7	0.4	5.7	4.4	100.0
New Hampshire	11.6	5.1	62.2	0.0	6.8	10.4	3.9	100.0
Rhode Island	0.1	16.1	54.4	0.0	0.0	4.1	25.4	100.0
Vermont	0.7	3.6	50.9	31.2	9.9	10.6	(6.9)	100.0
Regional Average	2.0	11.0	64.7	9.8	3.5	6.7	2.4	100.0
MID-ATLANTIC								
Delaware	24.9	15.7	68.1	0.0	0.0	4.8	(13.5)	100.0
Maryland	17.1	15.2	44.1	10.7	1.3	4.1	7.6	100.0
New Jersey	3.5	19.0	58.7	6.0	(0.1)[3]	2.4	10.5	100.0
New York	8.2	21.1	53.1	5.1	10.8	2.7	(1.0)	100.0
Pennsylvania	38.5	21.1	35.0	4.1	0.2	2.7	(1.6)	100.0
Regional Average	19.1	20.0	47.2	5.4	3.8	2.8	1.7	100.0
MIDWEST								
Illinois	21.9	29.8	37.0	8.8	0.0.	1.9	0.6	100.0
Indiana	47.4	21.2	29.8	0.0	0.2	2.1	(0.6)	100.0
Iowa	25.9	26.4	38.3	2.4	1.0	1.0	5.0	100.0
Michigan	27.8	30.9	31.7	7.0	2.2	2.5	(2.0)	100.0
Minnesota	20.6	22.0	39.6	9.0	0.9	3.7	4.2	100.0
Ohio	38.4	21.9	32.9	1.2	0.0	2.0	3.6	100.0
Wisconsin	24.4	24.4	34.4	7.8	1.6	5.3	2.0	100.0
Regional Average	31.1	25.1	34.5	4.5	0.6	2.5	1.2	100.0
SOUTH								
Alabama	40.2	18.0	30.6	16.7	4.1	4.4	(14.0)	100.0
Arkansas	12.1	32.0	37.3	11.7	1.5	5.4	0.1	100.0
District of Columbia	1.9	19.8	27.9	0.0	0.0	.2	50.2	100.0
Florida	9.3	13.6	67.0	6.2	0.1	2.7	1.1	100.0
Georgia	31.3	18.7	39.9	4.5	1.4	6.0	(1.8)	100.0
Kentucky	49.9	15.1	33.3	0.0	2.0	3.5	(3.8)	100.0
Louisiana	0.7	51.6	41.1	0.0	0.0	1.3	5.3	100.0
Mississippi	10.0	29.9	44.5	0.0	0.0	4.4	11.2	100.0
North Carolina	37.8	9.0	38.3	3.9	1.8	6.9	2.3	100.0
Oklahoma	12.1	53.8	35.5	0.0	0.9	1.9	(4.3)	100.0
South Carolina	26.2	14.0	33.3	18.2	1.3	4.9	2.0	100.0
Tennessee	32.6	13.3	29.3	3.0	3.6	5.0	13.2	100.0
Texas	10.8	48.2	41.0	0.0	0.1	0.9	(1.0)	100.0
Virginia	17.0	10.0	43.4	12.4	0.2	5.5	11.4	100.0
West Virginia	111.6	19.3	26.3	0.0	1.4	3.1	(61.7)	100.0
Regional Average	20.6	31.3	40.6	3.8	0.9	3.0	(0.3)	100.0

TABLE 7 (continued)

STATE ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Nuclear	Hydro	Wood	Electricity Imported (Exported) Across State Borders[1]	Total State Consumption[2]
WEST								
Alaska	2.0	44.4	49.2	0.0	2.2	2.3	0.0	100.0
Arizona	40.8	23.5	37.9	0.0	8.8	1.0	(12.0)	100.0
California	1.3	30.0	50.6	0.5	4.9	2.6	8.3	100.0[4]
Colorado	32.8	25.2	37.4	1.0	1.7	2.0	(0.1)	100.0
Hawaii	0.0	1.3	98.3	0.0	0.3	0.1	0.0	100.0
Idaho	3.8	12.1	29.0	0.0	26.0	4.9	24.2	100.0
Kansas	21.9	45.2	35.6	0.0	0.0	0.8	(3.6)	100.0
Missouri	37.9	20.5	39.3	0.0	0.5	3.3	(1.5)	100.0
Montana	18.5	15.5	43.3	0.0	34.0	3.5	(14.8)	100.0
Nebraska	19.6	27.8	39.1	12.8	2.4	0.8	(2.6)	100.0
Nevada	38.7	25.9	47.0	0.0	6.2	0.8	(18.6)	100.0
New Mexico	40.2	41.1	47.2	0.0	0.2	2.0	(30.6)	100.0
North Dakota	69.1	13.4	55.4	0.0	22.1	0.2	(60.2	100.0
Oregon	3.0	8.2	37.5	7.4	35.5	7.5	0.8	100.0
South Dakota	19.5	11.6	55.1	0.0	28.3	0.9	(15.4)	100.0
Utah	36.0	22.0	36.7	0.0	1.4	1.2	2.7	100.0
Washington	5.4	7.4	33.5	1.3	61.2	4.4	(13.2)	100.0
Wyoming	86.1	18.2	46.7	0.0	2.2	0.8	(54.1)	100.0
Regional Average	16.4	24.7	44.7	1.3	14.0	2.6	(2.5)	100.0
NORTHEAST	15.5	18.1	50.8	6.4	3.7	3.6	1.8	100.0
MIDWEST	31.1	25.1	34.5	4.5	0.6	2.5	1.2	100.0
NORTHEAST AND MIDWEST	23.9	22.0	41.7	5.3	2.0	3.0	1.5	100.0
SOUTH	20.6	31.3	40.6	3.8	0.9	3.0	(0.3)	100.0
WEST	16.4	24.7	44.7	1.3	14.0	2.6	(2.5)	100.0
SOUTH AND WEST	19.1	29.0	42.0	2.9	5.5	2.9	(1.0)	100.0
U.S. AVERAGE	21.0	26.1	41.9	3.9	4.0	2.9	0.0	100.0

[1]Under the heading Electricity Imported (Exported) Across State Borders, a figure outside of parentheses represents the percentage of a state's electrical supply purchased from other states and therefore added to the state total; a figure within parentheses represents sales of electricity to neighboring states and therefore subtracted from the state total.
[2]Percentages may not total 100.0 due to rounding.
[3]Represents pumped storage during peak periods resulting in net consumption rather than production of energy.
[4]Geothermal energy represents 2.0 percent of California's consumption.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report 1960-1981 (Washington, D.C., June 1983), p. 3, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 93-94.

TABLE 8

STATE ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Nuclear	Hydro	Wood	Total State Consumption
NEW ENGLAND							
Connecticut	0.0	0.4	1.4	4.6	0.1	1.2	0.9
Maine	0.0	0.0	0.7	1.9	2.0	2.1	0.5
Massachusetts	0.2	1.0	2.8	1.6	0.1	3.2	1.7
New Hampshire	0.2	0.1	0.4	0.0	0.5	1.0	0.3
Rhode Island	0.0	0.2	0.3	0.0	*	0.3	0.2
Vermont	0.0	0.0	0.2	1.3	0.4	0.6	0.2
Regional Total	0.4	1.6	5.8	9.5	3.1	8.5	3.7
MID-ATLANTIC							
Delaware	0.3	0.2	0.4	0.0	0.0	0.4	0.3
Maryland	1.3	0.9	1.6	4.2	0.5	2.1	1.5
New Jersey	0.5	2.0	3.9	4.3	(0.1)[1]	2.3	2.8
New York	1.9	3.9	6.1	6.4	13.0	4.5	4.8
Pennsylvania	9.2	4.0	4.2	5.2	0.2	4.7	5.0
Regional Total	13.1	11.0	16.3	20.1	13.6	14.0	14.4
MIDWEST							
Illinois	5.0	5.5	4.2	10.8	0.0	3.1	4.8
Indiana	7.1	2.6	2.2	0.0	0.2	2.3	3.2
Iowa	1.6	1.3	1.2	0.8	0.3	0.4	1.3
Michigan	4.6	4.1	2.6	6.3	1.9	2.9	3.5
Minnesota	1.6	1.4	1.5	3.7	0.3	2.1	1.6
Ohio	9.8	4.5	4.2	1.6	0.0	3.7	5.3
Wisconsin	2.1	1.7	1.5	3.6	0.7	3.2	1.8
Regional Total	31.8	21.0	17.5	26.8	3.5	17.7	21.5
SOUTH							
Alabama	3.9	1.4	1.5	8.7	2.0	3.0	2.0
Arkansas	0.6	1.4	1.0	3.3	0.4	2.0	1.1
District of Columbia	0.0	0.1	0.1	0.0	0.0	0.0	0.2
Florida	1.5	1.7	5.3	5.3	0.1	3.0	3.3
Georgia	3.4	1.6	2.2	2.7	0.8	4.6	2.3
Kentucky	4.2	1.0	1.4	0.0	0.9	2.1	1.8
Louisiana	0.2	9.2	4.6	0.0	0.0	2.0	4.7
Mississippi	0.5	1.3	1.2	0.0	0.0	1.6	1.1
North Carolina	4.1	0.8	2.1	2.3	1.0	5.3	2.3
Oklahoma	1.0	3.5	1.4	0.0	0.4	1.1	1.7
South Carolina	1.7	0.7	1.1	6.4	0.4	2.3	1.4
Tennessee	3.5	1.2	1.6	1.7	2.0	3.9	2.3
Texas	5.6	20.3	10.7	0.0	0.3	3.4	11.0
Virginia	1.7	0.8	2.1	6.5	0.1	3.9	2.0
West Virginia	5.5	0.8	0.6	0.0	0.4	1.1	1.0
Regional Total	37.4	45.7	36.9	36.9	8.8	39.4	38.1

TABLE 8 (continued)

STATE ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Nuclear	Hydro	Wood	Total State Consumption
WEST							
Alaska	0.0	0.6	0.4	0.0	0.2	0.3	0.4
Arizona	2.0	0.9	0.9	0.0	2.3	0.4	1.0
California	0.5	9.6	10.1	1.2	10.1	7.4	8.4[2]
Colorado	1.8	1.1	1.0	0.3	0.5	0.8	1.1
Hawaii	0.0	0.0	0.7	0.0	0.0	0.0	0.3
Idaho	0.1	0.2	0.3	0.0	3.2	0.8	0.5
Kansas	1.3	2.2	1.1	0.0	0.0	0.4	1.3
Missouri	3.4	1.3	1.7	0.0	0.2	2.1	1.9
Montana	0.4	0.3	0.5	0.0	3.8	0.5	0.5
Nebraska	0.6	0.7	0.6	2.2	0.4	0.2	0.7
Nevada	0.7	0.4	0.4	0.0	0.6	0.1	0.4
New Mexico	1.2	1.0	0.7	0.0	0.0	0.4	0.6
North Dakota	1.1	0.2	0.5	0.0	1.9	0.0	0.3
Oregon	0.2	0.4	1.1	2.4	10.9	3.2	1.2
South Dakota	0.2	0.1	0.3	0.0	1.8	0.1	0.3
Utah	1.1	0.5	0.5	0.0	0.2	0.2	0.6
Washington	0.6	0.6	1.8	0.7	34.5	3.4	2.3
Wyoming	2.1	0.4	0.6	0.0	0.3	0.1	0.5
Regional Total	17.4	20.7	23.5	6.8	71.0	20.4	22.2
NORTHEAST	13.5	12.6	22.1	29.6	16.7	22.5	18.2
MIDWEST	31.8	21.0	17.5	26.8	3.5	17.7	21.5
NORTHEAST AND MIDWEST	45.2	33.6	39.6	56.4	20.2	40.1	39.7
SOUTH	37.4	45.7	36.9	36.9	8.8	39.4	38.1
WEST	17.4	20.7	23.5	6.8	71.0	20.4	22.2
SOUTH AND WEST	54.8	66.4	60.4	43.6	79.8	59.9	60.3
U.S. TOTAL[3]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1]Represents pumped storage during peak periods resulting in net consumption rather than production of energy.
[2]Geothermal energy provides 2.0 percent of California's energy consumption and accounts for .002 percent of total U.S. energy consumption.
[3]Percentages may not total 100.0 due to rounding.

*Indicates value of less than 0.05 percent but greater than zero.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report 1960-1981 (Washington, D.C., June 1983), p. 3, and Estimates of U.S. Wood Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 93-94.

TABLE 9

RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption[1]
NEW ENGLAND						
Connecticut	0.2	21.9	50.4	8.7	18.8	100.0
Maine	0.5	1.0	57.6	22.9	18.0	100.0
Massachusetts	0.4	36.5	41.5	6.9	14.7	100.0
New Hampshire	0.2	10.4	53.5	16.8	19.3	100.0
Rhode Island	0.0	37.8	40.1	6.2	15.8	100.0
Vermont	0.7	4.7	51.3	21.7	21.1	100.0
Regional Average	0.4	26.0	46.6	10.3	16.8	100.0
MID-ATLANTIC						
Delaware	0.0	29.3	38.1	12.1	20.5	100.0
Maryland	0.2	40.2	25.8	10.4	23.4	100.0
New Jersey	0.2	41.1	38.4	5.3	15.0	100.0
New York	0.7	47.7	30.7	6.4	14.5	100.0
Pennsylvania	3.9	45.9	24.9	8.2	17.0	100.0
Regional Average	1.6	44.9	29.9	7.2	16.3	100.0
MIDWEST						
Illinois	0.4	74.7	4.9	4.9	15.1	100.0
Indiana	1.1	54.7	13.0	9.3	21.9	100.0
Iowa	1.6	54.8	18.2	2.0	23.3	100.0
Michigan	0.4	68.4	10.7	7.0	13.6	100.0
Minnesota	0.6	48.0	18.7	12.1	20.5	100.0
Ohio	1.3	64.5	8.2	7.3	18.7	100.0
Wisconsin	0.2	47.3	22.3	10.8	19.4	100.0
Regional Average	0.7	63.3	11.1	7.3	17.6	100.0
SOUTH						
Alabama	0.7	39.6	8.5	9.4	41.8	100.0
Arkansas	0.0	49.3	7.5	10.9	32.3	100.0
District of Columbia	4.4	67.8	8.2	1.2	17.9	100.0
Florida	0.0	7.8	12.2	6.4	73.5	100.0
Georgia	0.2	48.5	7.0	8.8	35.5	100.0
Kentucky	3.1	44.5	7.9	15.6	28.8	100.0
Louisiana	0.0	54.1	2.8	4.3	38.9	100.0
Mississippi	0.0	36.1	9.7	13.4	40.8	100.0
North Carolina	0.6	15.3	24.0	21.8	38.3	100.0
Oklahoma	0.0	51.2	5.4	10.8	32.6	100.0
South Carolina	1.3	20.9	18.4	11.6	47.9	100.0
Tennessee	0.9	24.5	6.1	20.5	48.0	100.0
Texas	0.0	48.2	5.3	2.3	44.2	100.0
Virginia	0.7	25.4	20.7	19.2	34.1	100.0
West Virginia	1.8	49.4	8.4	16.9	23.4	100.0
Regional Average	0.6	36.6	10.2	11.2	41.3	100.0

TABLE 9 (continued)

RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption[1]
WEST						
Alaska	0.0	38.5	25.7	15.4	20.0	100.0
Arizona	0.0	40.6	3.5	7.0	48.9	100.0
California	0.0	67.6	2.3	5.7	24.3	100.0
Colorado	0.7	61.6	6.6	7.8	23.2	100.0
Hawaii	0.0	14.0	16.1	0.0	71.0	100.0
Idaho	2.2	19.3	9.8	19.2	49.4	100.0
Kansas	0.0	68.8	5.5	2.4	23.3	100.0
Missouri	0.4	53.8	10.4	12.5	22.9	100.0
Montana	0.3	55.7	10.7	2.2	31.1	100.0
Nebraska	0.3	62.9	10.1	0.2	26.7	100.0
Nevada	0.3	44.4	8.6	7.1	39.5	100.0
New Mexico	0.0	56.2	8.0	18.1	17.8	100.0
North Dakota	5.8	31.6	29.9	2.0	30.9	100.0
Oregon	0.0	18.3	18.2	16.9	46.7	100.0
South Dakota	2.2	36.2	27.2	3.7	30.8	100.0
Utah	2.6	74.1	2.6	5.4	15.4	100.0
Washington	0.7	16.4	13.7	11.2	58.0	100.0
Wyoming	5.2	42.8	13.2	12.1	26.3	100.0
Regional Average	0.5	54.4	7.6	7.9	29.6	100.0
NORTHEAST	1.3	40.5	33.8	8.0	16.4	100.0
MIDWEST	0.7	63.3	11.1	7.3	17.6	100.0
NORTHEAST AND MIDWEST	1.0	52.2	22.1	7.6	17.0	100.0
SOUTH	0.6	36.6	10.2	11.2	41.3	100.0
WEST	0.5	54.4	7.6	7.9	29.6	100.0
SOUTH AND WEST	0.6	44.5	9.0	9.8	36.1	100.0
U.S. AVERAGE	0.8	48.7	16.1	8.6	25.8	100.0

[1]Percentages may not total 100.0 due to rounding.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 5, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 101-102.

TABLE 10

COMMERCIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption[1]
NEW ENGLAND						
Connecticut	0.3	31.7	32.7	0.4	34.8	100.0
Maine	1.4	5.3	63.3	1.2	29.3	100.0
Massachusetts	0.8	33.4	35.7	0.2	29.9	100.0
New Hampshire	0.0	28.8	44.1	0.9	25.6	100.0
Rhode Island	0.0	40.6	22.0	0.3	37.1	100.0
Vermont	1.1	10.2	54.4	1.4	32.9	100.0
Regional Average	0.6	30.4	37.1	0.4	31.4	100.0
MID-ATLANTIC						
Delaware	0.0	15.3	65.2	0.2	19.3	100.0
Maryland	0.6	42.0	15.1	0.5	41.8	100.0
New Jersey	0.3	34.2	39.0	0.2	26.3	100.0
New York	1.2	34.4	33.8	0.2	30.4	100.0
Pennsylvania	7.6	47.7	16.6	0.4	27.8	100.0
Regional Average	2.6	37.8	30.0	0.2	29.4	100.0
MIDWEST						
Illinois	1.1	59.3	10.3	0.2	29.0	100.0
Indiana	4.7	57.6	8.3	0.4	29.0	100.0
Iowa	4.7	57.8	9.9	0.1	27.7	100.0
Michigan	1.3	68.5	8.1	0.3	21.8	100.0
Minnesota	2.4	67.1	8.4	0.5	21.5	100.0
Ohio	4.6	56.6	8.1	0.3	30.4	100.0
Wisconsin	0.7	60.8	7.8	0.4	30.2	100.0
Regional Average	2.5	61.0	8.9	0.3	27.4	100.0
SOUTH						
Alabama	1.9	39.6	13.4	0.3	44.8	100.0
Arkansas	0.0	58.1	8.6	0.4	32.9	100.0
District of Columbia	6.4	54.6	8.5	0.0	30.5	100.0
Florida	0.0	20.5	16.8	0.2	62.4	100.0
Georgia	0.5	51.0	10.1	0.3	38.1	100.0
Kentucky	10.7	44.8	8.3	0.6	35.5	100.0
Louisiana	0.0	20.0	57.1	0.1	22.8	100.0
Mississippi	0.0	32.9	33.7	0.3	33.1	100.0
North Carolina	2.5	27.4	14.9	0.9	54.1	100.0
Oklahoma	0.1	49.7	7.2	0.3	42.6	100.0
South Carolina	3.6	35.3	10.1	0.4	50.6	100.0
Tennessee	2.3	39.8	9.5	0.6	47.7	100.0
Texas	0.0	39.6	20.8	0.0	39.5	100.0
Virginia	2.1	31.3	12.4	0.7	53.4	100.0
West Virginia	7.3	50.0	11.5	0.7	30.6	100.0
Regional Average	1.5	36.3	20.1	0.3	41.8	100.0

TABLE 10 (continued)

COMMERCIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption[1]
WEST						
Alaska	0.0	71.0	18.8	0.3	9.8	100.0
Arizona	0.0	44.9	3.4	0.1	51.6	100.0
California	0.0	41.7	18.5	0.1	39.7	100.0
Colorado	1.8	63.3	4.9	0.2	29.7	100.0
Hawaii	0.0	20.0	22.4	0.0	57.6	100.0
Idaho	5.9	21.9	7.0	0.5	65.0	100.0
Kansas	0.1	65.0	5.0	0.1	29.7	100.0
Missouri	1.6	55.6	9.1	0.5	33.3	100.0
Montana	0.4	56.5	12.4	0.6	30.1	100.0
Nebraska	0.5	68.0	6.2	0.1	25.0	100.0
Nevada	0.5	46.4	15.3	0.2	37.6	100.0
New Mexico	0.2	51.9	20.0	0.4	27.4	100.0
North Dakota	15.1	47.3	17.1	0.1	20.5	100.0
Oregon	0.0	25.2	23.1	0.5	51.0	100.0
South Dakota	6.9	52.4	15.6	0.1	25.6	100.0
Utah	21.9	2.4	13.4	0.4	61.3	100.0
Washington	2.1	28.1	11.4	0.3	57.9	100.0
Wyoming	15.6	34.2	13.4	0.4	36.4	100.0
Regional Average	1.3	45.7	13.9	0.2	38.8	100.0
NORTHEAST	2.2	36.3	31.4	0.3	29.8	100.0
MIDWEST	2.5	61.0	8.9	0.3	27.4	100.0
NORTHEAST AND MIDWEST	2.3	48.5	20.3	0.3	28.6	100.0
SOUTH	1.5	36.3	20.1	0.3	41.8	100.0
WEST	1.3	45.7	13.9	0.2	38.8	100.0
SOUTH AND WEST	1.4	40.5	17.3	0.3	40.4	100.0
U.S. AVERAGE	1.8	44.3	18.7	0.3	34.9	100.0

[1]Percentages may not total 100.0 due to rounding.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 6, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 109-110.

TABLE 11

INDUSTRIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Industrial Hydro[1]	Wood	Electricity Sales	Total State Consumption[2]
NEW ENGLAND							
Connecticut	0.2	18.2	51.6	0.1	11.5	18.6	100.0
Maine	2.5	0.6	51.9	8.1	27.7	9.3	100.0
Massachusetts	1.0	14.3	45.7	0.3	24.7	14.1	100.0
New Hampshire	0.2	2.8	41.0	3.7	33.0	19.4	100.0
Rhode Island	0.3	13.8	60.5	0.0	13.4	12.0	100.0
Vermont	0.8	8.6	43.6	2.9	27.6	16.5	100.0
Regional Average	1.0	10.9	48.9	2.3	22.6	14.3	100.0
MID-ATLANTIC							
Delaware	7.2	25.1	42.9	0.0	11.4	13.5	100.0
Maryland	23.6	21.3	30.7	0.0	9.3	15.0	100.0
New Jersey	0.1	17.9	65.0	0.0	6.1	10.9	100.0
New York	19.9	18.9	36.2	0.4	8.0	16.6	100.0
Pennsylvania	36.3	26.1	21.6	0.0	3.9	12.1	100.0
Regional Average	24.0	22.4	34.2	0.1	6.0	13.3	100.0
MIDWEST							
Illinois	11.1	32.9	41.9	0.0	3.4	10.7	100.0
Indiana	41.5	24.9	21.5	0.0	2.1	10.0	100.0
Iowa	10.2	37.1	40.2	0.0	2.1	10.5	100.0
Michigan	26.3	34.3	20.1	0.2	3.9	15.2	100.0
Minnesota	9.4	26.9	40.7	0.4	6.2	16.3	100.0
Ohio	29.6	21.5	34.1	0.0	2.5	12.2	100.0
Wisconsin	15.3	35.1	24.4	0.7	11.8	12.7	100.0
Regional Average	24.3	28.3	31.5	0.1	3.7	12.1	100.0
SOUTH							
Alabama	25.1	29.9	21.5	0.0	9.3	14.2	100.0
Arkansas	2.6	42.3	32.7	0.0	11.4	11.0	100.0
District of Columbia	0.6	2.4	27.5	0.0	0.0	69.5	100.0
Florida	3.0	25.2	48.0	0.0	11.8	12.1	100.0
Georgia	3.9	34.8	28.2	0.1	18.7	14.3	100.0
Kentucky	17.8	17.9	34.1	0.0	5.5	24.7	100.0
Louisiana	0.4	57.9	35.4	0.0	1.9	4.4	100.0
Mississippi	1.2	33.3	44.3	0.0	10.3	10.9	100.0
North Carolina	9.9	20.0	34.9	0.0	15.9	19.2	100.0
Oklahoma	2.6	57.4	30.1	0.0	2.0	7.9	100.0
South Carolina	17.0	30.5	20.8	0.2	12.3	19.2	100.0
Tennessee	18.1	27.5	20.0	0.0	11.0	23.5	100.0
Texas	3.3	50.7	38.0	0.0	1.6	6.5	100.0
Virginia	28.6	15.6	30.6	0.1	13.4	11.8	100.0
West Virginia	44.9	20.0	18.9	2.2	2.4	11.6	100.0
Regional Average	7.6	42.9	34.0	0.1	5.5	9.9	100.0

TABLE 11 (continued)

INDUSTRIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Industrial Hydro[1]	Wood	Electricity Sales	Total State Consumption[2]
WEST							
Alaska	0.0	70.1	23.3	0.0	3.1	3.4	100.0
Arizona	18.4	28.5	31.0	0.1	1.8	20.1	100.0
California	6.1	35.5	36.6	0.0	9.1	12.7	100.0
Colorado	21.6	29.7	33.1	0.0	3.7	11.9	100.0
Hawaii	0.0	0.0	74.9	1.4	0.6	23.1	100.0
Idaho	11.2	27.3	30.1	0.0	10.7	20.7	100.0
Kansas	2.4	53.8	34.5	0.0	1.6	7.7	100.0
Missouri	13.1	24.7	41.3	0.0	5.3	15.6	100.0
Montana	6.0	16.0	55.7	0.0	4.3	18.0	100.0
Nebraska	6.2	33.8	48.2	0.0	1.7	10.1	100.0
Nevada	10.6	16.7	35.3	0.0	0.0	37.4	100.0
New Mexico	2.2	41.4	47.6	0.0	1.1	7.7	100.0
North Dakota	13.5	17.1	63.6	0.0	0.0	6.0	100.0
Oregon	3.6	17.5	32.9	0.1	23.3	22.6	100.0
South Dakota	8.6	8.0	72.9	0.6	1.6	8.4	100.0
Utah	31.6	26.8	29.4	0.0	0.9	11.2	100.0
Washington	2.3	17.2	36.0	0.3	14.3	29.9	100.0
Wyoming	21.8	24.6	46.0	0.0	0.3	7.3	100.0
Regional Average	8.9	30.9	38.5	0.1	7.0	14.7	100.0
NORTHEAST	20.2	20.5	36.6	0.5	8.7	13.5	100.0
MIDWEST	24.3	28.3	31.5	0.1	3.7	12.1	100.0
NORTHEAST AND MIDWEST	22.7	25.3	33.5	0.2	5.6	12.6	100.0
SOUTH	7.6	42.9	34.0	0.1	5.5	9.9	100.0
WEST	8.9	30.9	38.5	0.1	7.0	14.7	100.0
SOUTH AND WEST	8.0	39.6	35.2	0.1	5.9	11.2	100.0
U.S. AVERAGE	13.3	34.4	34.6	0.1	5.8	11.7	100.0

[1]Hydropower sites owned by industry.
[2]Percentages may not total 100.0 due to rounding.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 7, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 117-118.

TABLE 12

RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption
NEW ENGLAND						
Connecticut	0.4	0.7	5.1	1.7	1.2	1.6
Maine	0.4	0.0	2.1	1.6	0.4	0.6
Massachusetts	1.6	2.1	7.3	2.3	1.6	2.8
New Hampshire	0.1	0.1	1.5	0.9	0.3	0.5
Rhode Island	0.0	0.3	1.0	0.3	0.3	0.4
Vermont	0.3	0.0	0.9	0.7	0.2	0.3
Regional Total	2.7	3.3	18.0	7.4	4.1	6.2
MID-ATLANTIC						
Delaware	0.0	0.2	0.6	0.4	0.2	0.2
Maryland	0.5	1.5	3.0	2.3	1.7	1.9
New Jersey	1.2	3.2	9.0	2.3	2.2	3.8
New York	6.6	7.4	14.4	5.6	4.3	7.6
Pennsylvania	32.3	6.3	10.3	6.4	4.4	6.7
Regional Total	40.6	18.6	37.3	17.0	12.8	20.2
MIDWEST						
Illinois	3.5	10.3	2.0	3.8	3.9	6.7
Indiana	4.3	3.5	2.5	3.4	2.6	3.1
Iowa	3.0	1.7	1.7	0.4	1.4	1.5
Michigan	2.5	8.0	3.7	4.6	3.0	5.7
Minnesota	1.7	2.1	2.5	3.0	1.7	2.1
Ohio	9.7	8.3	3.2	5.3	4.5	6.3
Wisconsin	0.5	2.5	3.5	3.2	1.9	2.5
Regional Total	25.1	36.3	19.2	23.7	19.1	27.9
SOUTH						
Alabama	1.2	1.1	0.7	1.5	2.2	1.4
Arkansas	0.0	0.9	0.4	1.2	1.2	.9
District of Columbia	1.2	0.3	0.1	0.0	0.2	.2
Florida	0.0	0.4	1.7	1.7	6.4	2.2
Georgia	0.4	2.0	0.9	2.1	2.8	2.0
Kentucky	6.6	1.6	0.8	3.1	1.9	1.7
Louisiana	0.0	1.8	0.3	0.8	2.4	1.6
Mississippi	0.0	0.6	0.5	1.3	1.3	.8
North Carolina	1.8	0.7	3.5	5.9	3.5	2.3
Oklahoma	0.0	1.5	0.5	1.8	1.9	1.5
South Carolina	1.6	0.4	1.1	1.3	1.8	1.0
Tennessee	2.1	0.9	0.7	4.4	3.4	1.8
Texas	0.1	4.6	1.5	1.2	8.0	4.6
Virginia	1.8	1.1	2.8	4.8	2.8	2.2
West Virginia	2.3	1.0	0.5	2.0	0.9	1.0
Regional Total	19.0	19.1	16.0	33.1	40.6	25.3

TABLE 12 (continued)

RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption
WEST						
Alaska	0.0	0.2	0.3	0.4	0.2	0.2
Arizona	0.0	0.6	0.1	0.6	1.3	0.7
California	0.0	10.7	1.1	5.2	7.3	7.7
Colorado	1.2	1.7	0.5	1.2	1.2	1.3
Hawaii	0.0	0.0	0.1	0.0	0.3	0.1
Idaho	1.0	0.1	0.2	0.8	0.7	0.4
Kansas	0.0	1.6	0.4	0.3	1.1	1.2
Missouri	1.4	2.8	1.7	3.7	2.3	2.6
Montana	0.1	0.4	0.2	0.1	0.4	0.3
Nebraska	0.3	1.0	0.5	0.0	0.8	0.7
Nevada	0.1	0.3	0.2	0.3	0.5	0.3
New Mexico	0.0	0.5	0.2	1.0	0.3	0.5
North Dakota	2.2	0.2	0.6	0.1	0.4	0.3
Oregon	0.0	0.4	1.1	2.0	1.8	1.0
South Dakota	0.8	0.2	0.5	0.1	0.3	0.3
Utah	2.6	1.2	0.1	0.5	0.5	0.8
Washington	1.6	0.6	1.5	2.3	3.9	1.8
Wyoming	1.4	0.2	0.2	0.3	0.2	0.2
Regional Total	12.7	22.7	9.6	18.8	23.5	20.4
NORTHEAST	43.3	21.9	55.3	24.4	16.8	26.4
MIDWEST	25.1	36.3	19.2	23.7	19.1	27.9
NORTHEAST AND MIDWEST	68.3	58.2	74.4	48.1	35.9	54.3
SOUTH	19.0	19.1	16.0	33.1	40.6	25.3
WEST	12.7	22.7	9.6	18.8	23.5	20.4
SOUTH AND WEST	31.7	41.8	25.6	51.9	64.1	45.7
U.S. TOTAL[1]	100.0	100.0	100.0	100.0	100.0	100.0

[1]Percentages may not total 100.0 due to rounding.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 5, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 101-102.

TABLE 13

COMMERCIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption
NEW ENGLAND						
Connecticut	0.2	0.9	2.2	1.6	1.3	1.3
Maine	0.3	0.0	1.2	1.5	0.3	0.4
Massachusetts	1.1	2.0	5.0	2.3	2.3	2.6
New Hampshire	0.0	0.2	0.6	0.9	0.2	0.3
Rhode Island	0.0	0.3	0.3	0.3	0.3	0.3
Vermont	0.1	0.0	0.4	0.8	0.1	0.2
Regional Total	1.7	3.4	9.9	7.4	4.5	5.0
MID-ATLANTIC						
Delaware	0.0	0.2	1.5	0.3	0.2	0.4
Maryland	0.5	1.3	1.1	2.3	1.6	1.3
New Jersey	0.6	3.0	8.0	2.3	2.9	3.8
New York	5.6	6.6	15.5	5.5	7.4	8.5
Pennsylvania	19.5	5.1	4.2	6.3	3.8	4.7
Regional Total	26.2	16.1	30.3	16.7	16.0	18.9
MIDWEST						
Illinois	4.1	8.9	3.7	3.8	5.5	6.6
Indiana	5.6	2.8	1.0	3.4	1.8	2.2
Iowa	3.6	1.9	0.8	0.3	1.1	1.4
Michigan	3.2	6.9	1.9	4.6	2.8	4.5
Minnesota	2.2	2.6	0.8	2.9	1.1	1.7
Ohio	12.3	6.4	2.2	5.2	4.4	5.0
Wisconsin	0.7	2.7	0.8	3.2	1.7	2.0
Regional Total	31.8	32.2	11.1	23.4	18.4	23.4
SOUTH						
Alabama	1.2	1.1	0.9	1.5	1.5	1.2
Arkansas	0.0	1.1	0.4	1.2	0.8	0.9
District of Columbia	1.7	0.6	0.2	0.0	0.4	0.5
Florida	0.0	1.3	2.6	1.6	5.2	2.9
Georgia	0.6	2.3	1.1	2.1	2.1	2.0
Kentucky	8.3	1.4	0.6	3.0	1.5	1.4
Louisiana	0.0	1.6	10.6	0.8	2.3	3.5
Mississippi	0.0	0.8	1.9	1.3	1.0	1.0
North Carolina	2.3	1.0	1.3	5.9	2.6	1.7
Oklahoma	0.1	1.6	0.6	1.8	1.8	1.4
South Carolina	1.9	0.8	0.5	1.3	1.4	1.0
Tennessee	2.3	1.7	1.0	4.3	2.6	1.9
Texas	0.1	6.2	7.7	1.2	7.9	7.0
Virginia	2.2	1.4	1.3	4.8	3.0	2.0
West Virginia	3.1	0.9	0.5	2.0	0.7	0.8
Regional Total	23.7	23.8	31.1	32.8	34.8	29.0

TABLE 13 (continued)

COMMERCIAL SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Wood	Electricity Sales	Total State Consumption
WEST						
Alaska	0.0	0.6	0.4	0.4	0.1	0.4
Arizona	0.0	1.1	0.2	0.5	1.5	1.0
California	0.0	9.4	9.9	5.1	11.4	10.0
Colorado	1.6	2.3	0.4	1.2	1.4	1.6
Hawaii	0.0	0.1	0.2	0.0	0.2	0.1
Idaho	1.4	0.2	0.2	0.9	0.8	0.4
Kansas	0.1	2.1	0.4	0.3	1.2	1.4
Missouri	1.9	2.7	1.1	3.7	2.1	2.2
Montana	0.1	0.5	0.3	0.9	0.4	0.4
Nebraska	0.3	1.6	0.3	0.2	0.8	1.0
Nevada	0.1	0.3	0.3	0.2	0.3	0.3
New Mexico	0.1	0.8	0.7	1.0	0.5	0.7
North Dakota	2.9	0.4	0.3	0.1	0.2	0.4
Oregon	0.0	0.6	1.3	2.0	1.5	1.0
South Dakota	1.0	0.3	0.2	0.1	0.2	0.3
Utah	3.3	0.0	0.2	0.4	0.5	0.3
Washington	2.0	1.1	1.1	2.3	3.0	1.8
Wyoming	1.9	0.2	0.2	0.3	0.2	0.2
Regional Total	16.7	24.4	17.6	19.7	26.4	23.7
NORTHEAST	27.9	19.5	40.1	24.1	20.4	23.9
MIDWEST	31.8	32.2	11.1	23.4	18.4	23.4
NORTHEAST AND MIDWEST	59.6	51.8	51.3	47.5	38.8	47.3
SOUTH	23.7	23.8	31.1	32.8	34.8	29.0
WEST	16.7	24.4	17.6	19.7	26.4	23.7
SOUTH AND WEST	40.4	48.2	48.7	52.5	61.2	52.7
U.S. TOTAL[1]	100.0	100.0	100.0	100.0	100.0	100.0

[1]Percentages may not total 100.0 due to rounding.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 6, and Estimates of Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 109-110.

TABLE 14

INDUSTRIAL SECTOR CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Industrial Hydropower[1]	Wood	Electricity Sales	Total State Consumption
NEW ENGLAND							
Connecticut	.0	.3	.7	.3	1.0	.8	.5
Maine	.1	.0	.8	30.8	2.5	.4	.5
Massachusetts	.1	.4	1.2	2.1	3.9	1.1	.9
New Hampshire	.0	.0	.2	4.9	1.0	.3	.2
Rhode Island	.0	.1	.3	0.0	.4	.2	.2
Vermont	.0	.0	.1	2.1	.5	.1	.1
Regional Total	.2	.7	3.3	40.2	9.2	2.9	2.3
MID-ATLANTIC							
Delaware	.1	.2	.3	0.0	.5	.3	.2
Maryland	2.3	.8	1.1	0.0	2.1	1.7	1.3
New Jersey	.0	1.1	4.0	0.0	2.2	2.0	2.1
New York	4.1	1.5	2.9	7.3	3.8	3.9	2.8
Pennsylvania	14.8	4.1	3.4	0.0	3.6	5.6	5.5
Regional Total	21.4	7.7	11.7	7.3	12.2	13.5	11.9
MIDWEST							
Illinois	3.7	4.3	5.4	.6	2.7	4.1	4.5
Indiana	13.5	3.1	2.7	0.0	1.6	3.7	4.3
Iowa	1.0	1.4	1.5	0.0	.5	1.2	1.3
Michigan	5.7	2.9	1.7	3.7	1.9	3.7	2.9
Minnesota	1.0	1.1	1.6	4.6	1.5	1.9	1.4
Ohio	13.9	3.9	6.2	0.0	2.7	6.6	6.3
Wisconsin	1.8	1.6	1.1	8.2	3.2	1.7	1.6
Regional Total	40.6	18.4	20.3	17.1	14.1	22.9	22.3
SOUTH							
Alabama	4.7	2.2	1.6	.6	4.0	3.0	2.5
Arkansas	.3	1.6	1.2	0.0	2.6	1.2	1.3
District of Columbia	.0	.*	.1	0.0	0.0	.4	.1
Florida	.4	1.4	2.6	0.0	3.9	1.9	1.9
Georgia	.6	2.0	1.6	1.8	6.2	2.3	1.9
Kentucky	2.1	.8	1.6	0.0	1.5	3.3	1.6
Louisiana	.3	14.5	8.8	0.0	2.8	3.2	8.6
Mississippi	.1	1.0	1.3	0.0	1.8	1.0	1.0
North Carolina	1.4	1.1	1.8	0.0	5.0	3.0	1.8
Oklahoma	.4	3.1	1.6	0.0	.6	1.3	1.9
South Carolina	1.7	1.2	.8	1.5	2.8	2.2	1.3
Tennessee	2.5	1.5	1.1	0.0	3.6	3.8	1.9
Texas	4.3	25.8	19.2	0.0	4.8	9.7	17.5
Virginia	3.1	.7	1.3	.9	3.3	1.4	1.4
West Virginia	4.6	.8	.7	22.0	.6	1.3	1.4
Regional Total	26.3	57.6	45.3	26.8	43.5	39.0	46.1

TABLE 14 (continued)

INDUSTRIAL SECTOR CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Industrial Hydropower[1]	Wood	Electricity Sales	Total State Consumption
WEST							
Alaska	0.0	.8	.3	0.0	.2	.1	.4
Arizona	1.0	.6	.6	.6	.2	1.2	.7
California	2.5	5.7	5.9	0.0	8.8	6.0	5.6
Colorado	1.3	.7	.8	0.0	.5	.8	.8
Hawaii	0.0	0.0	.4	2.1	.0	.4	.2
Idaho	.4	.4	.4	0.0	.8	.8	.5
Kansas	.2	2.2	1.4	0.0	.4	.9	1.4
Missouri	1.2	.9	1.5	0.0	1.2	1.7	1.3
Montana	.2	.2	.7	0.0	.3	.7	.5
Nebraska	.3	.5	.8	0.0	.2	.5	.5
Nevada	.1	.1	.2	0.0	0.0	.6	.2
New Mexico	.1	.7	.8	0.0	.1	.4	.6
North Dakota	.4	.2	.7	0.0	0.0	.2	.4
Oregon	.3	.5	.9	.9	3.9	1.9	1.0
South Dakota	.1	.0	.5	.9	.1	.2	.2
Utah	1.6	.5	.6	0.0	.1	.7	.7
Washington	.3	.8	1.7	4.0	4.1	4.2	1.7
Wyoming	1.4	.6	1.1	0.0	.0	.5	.9
Regional Total	11.6	15.6	19.4	8.5	20.9	21.7	17.4
NORTHEAST	21.6	8.5	15.0	47.6	21.4	16.3	14.2
MIDWEST	40.6	18.4	20.3	17.1	14.1	22.9	22.3
NORTHEAST AND MIDWEST	62.2	26.8	35.3	64.6	35.5	39.2	36.5
SOUTH	26.3	57.6	45.3	26.8	43.5	39.0	46.1
WEST	11.6	15.6	19.4	8.5	20.9	21.7	17.4
SOUTH AND WEST	37.8	73.2	64.7	35.4	64.5	60.8	63.5
U.S. TOTAL[2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1]Hydropower sites owned by industry.
[2]Percentages may not total 100.0 due to rounding.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 7, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), pp. 117-118.

TABLE 15

TRANSPORTATION SECTOR ENERGY CONSUMPTION
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Motor Gasoline	Percentage of U.S. Population
NEW ENGLAND		
Connecticut	1.3	1.4
Maine	0.5	0.5
Massachusetts	2.2	2.5
New Hampshire	0.4	0.4
Rhode Island	0.4	0.4
Vermont	0.2	0.2
Regional Total	4.9	5.4
MID-ATLANTIC		
Delaware	0.3	0.3
Maryland	1.9	1.9
New Jersey	3.1	3.2
New York	5.3	7.7
Pennsylvania	4.3	5.2
Regional Total	14.8	18.2
MIDWEST		
Illinois	4.4	5.0
Indiana	2.6	2.4
Iowa	1.3	1.3
Michigan	3.9	4.0
Minnesota	1.8	1.8
Ohio	4.6	4.7
Wisconsin	2.0	2.1
Regional Total	20.5	21.2
SOUTH		
Alabama	1.8	1.7
Arkansas	1.1	1.0
District of Columbia	0.2	0.3
Florida	4.7	4.4
Georgia	2.8	2.4
Kentucky	1.7	1.6
Louisiana	2.1	1.9
Mississippi	1.2	1.1
North Carolina	2.8	2.6
Oklahoma	1.7	1.4
South Carolina	1.5	1.4
Tennessee	2.3	2.0
Texas	7.8	6.4
Virginia	2.5	2.4
West Virginia	0.8	0.9
Regional Total	34.8	31.4

TABLE 15 (continued)

TRANSPORTATION SECTOR ENERGY CONSUMPTION
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Motor Gasoline	Percentage of U.S. Population
WEST		
Alaska	0.2	0.2
Arizona	1.3	1.2
California	10.6	10.6
Colorado	1.4	1.3
Hawaii	0.3	0.4
Idaho	0.4	0.4
Kansas	1.2	1.0
Missouri	2.4	2.2
Montana	0.4	0.3
Nebraska	0.7	0.7
Nevada	0.5	0.4
New Mexico	0.7	0.6
North Dakota	0.4	0.3
Oregon	1.2	1.2
South Dakota	0.3	0.3
Utah	0.6	0.7
Washington	1.8	1.8
Wyoming	0.3	0.2
Regional Total	24.9	23.7
NORTHEAST	19.8	23.6
MIDWEST	20.5	21.2
NORTHEAST AND MIDWEST	40.3	44.8
SOUTH	34.8	31.4
WEST	24.9	23.7
SOUTH AND WEST	59.7	55.2
U.S. TOTAL	100.0	100.0

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 8, and Bureau of the Census, U.S. Department of Commerce, Provisional Estimates of the Population of States: July 1, 1981, Series P-25, No. 911 (Washington, D.C., April 1982).

TABLE 16

UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Hydroelectric Power[1]	Nuclear	Wood	Total State Consumption[2]
NEW ENGLAND							
Connecticut	0.0	0.0	45.0	1.0	54.0	0.0	100.0
Maine	0.0	0.0	18.0	38.7	43.3	0.0	100.0
Massachusetts	6.6	2.1	76.1	1.1	14.0	0.0	100.0
New Hampshire	38.8	0.2	40.8	20.2	0.0	0.0	100.0
Rhode Island	0.0	25.7	74.3	0.0	0.0	0.0	100.0
Vermont	0.8	0.4	0.2	22.5	75.3	0.8	100.0
Regional Average	5.5	1.2	50.5	9.6	33.2	0.1	100.0
MID-ATLANTIC							
Delaware	52.9	6.8	40.3	0.0	0.0	0.0	100.0
Maryland	39.8	1.9	14.4	4.6	39.3	0.0	100.0
New Jersey	20.7	23.7	19.9	(0.7)[3]	36.4	0.0	100.0
New York	12.4	10.6	31.1	31.0	14.9	0.0	100.0
Pennsylvania	77.6	0.3	8.9	0.6	12.7	0.0	100.0
Regional Average	41.6	7.2	20.1	12.7	18.4	0.0	100.0
MIDWEST							
Illinois	62.8	1.3	5.9	0.1	29.9	0.0	100.0
Indiana	97.9	0.8	0.6	0.7	0.0	0.0	100.0
Iowa	84.8	1.4	0.4	4.0	9.4	0.0	100.0
Michigan	64.6	2.3	4.4	6.7	21.9	0.0	100.0
Minnesota	63.4	1.6	0.4	2.6	31.9	0.0	100.0
Ohio	95.1	0.2	0.5	0.0	4.2	0.0	100.0
Wisconsin	66.8	1.9	0.6	4.8	25.9	0.1	100.0
Regional Average	79.5	1.2	2.2	2.1	15.0	0.0	100.0
SOUTH							
Alabama	59.2	0.2	0.1	7.9	32.6	0.0	100.0
Arkansas	35.2	21.2	1.8	4.8	37.0	0.0	100.0
District of Columbia	0.0	0.0	100.0	0.0	0.0	0.0	100.0
Florida	21.4	17.0	46.4	0.2	15.1	0.0	100.0
Georgia	82.6	0.5	0.8	3.7	12.4	0.0	100.0
Kentucky	94.9	0.4	0.3	4.3	0.0	0.0	100.0
Louisiana	3.7	90.5	5.9	0.0	0.0	0.0	100.0
Mississippi	45.8	43.9	10.3	0.0	0.0	0.0	100.0
North Carolina	85.6	0.1	0.4	4.3	9.6	0.0	100.0
Oklahoma	31.8	65.6	0.0	2.6	0.0	0.0	100.0
South Carolina	49.3	1.2	3.0	2.9	43.6	0.0	100.0
Tennessee	80.5	0.1	0.3	10.4	8.7	0.0	100.0
Texas	34.7	64.5	0.4	0.4	0.0	0.0	100.0
Virginia	40.1	0.6	10.6	0.9	48.0	0.0	100.0
West Virginia	98.8	0.0	0.6	0.6	0.0	0.0	100.0
Regional Average	53.4	25.9	6.5	2.7	11.5	0.0	100.0

TABLE 16 (continued)

UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF STATE TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Hydroelectric Power[1]	Nuclear	Wood	Total State Consumption[2]
WEST							
Alaska	12.1	64.9	9.9	13.1	0.0	0.0	100.0
Arizona	68.9	14.0	0.7	16.4	0.0	0.0	100.0
California	0.0	47.3	20.2	21.6	2.4	0.0	100.0[4]
Colorado	86.2	5.1	0.4	5.3	3.0	0.0	100.0
Hawaii	0.0	0.0	99.9	0.1	0.0	0.0	100.0
Idaho	0.0	0.0	0.0	100.0	0.0	0.0	100.0
Kansas	70.5	28.1	1.3	0.0	0.0	0.0	100.0
Missouri	96.7	1.5	0.4	1.4	0.0	0.0	100.0
Montana	32.1	1.2	0.1	66.3	0.0	0.2	100.0
Nebraska	52.4	2.7	0.3	7.1	37.5	0.0	100.0
Nevada	62.3	26.5	0.9	10.4	0.0	0.0	100.0
New Mexico	76.9	22.3	0.4	0.4	0.0	0.0	100.0
North Dakota	73.6	0.0	0.2	26.1	0.0	0.0	100.0
Oregon	4.7	0.0	0.0	78.7	16.5	0.0	100.0
South Dakota	36.7	0.1	0.3	62.8	0.0	0.0	100.0
Utah	91.8	2.6	0.4	5.3	0.0	0.0	100.0
Washington	6.9	0.0	0.0	91.1	1.9	0.0	100.0
Wyoming	96.7	0.0	0.3	2.9	0.0	0.0	100.0
Regional Average	32.9	17.0	6.6	37.8	3.5	0.0	100.0
NORTHEAST	34.1	5.9	26.4	12.1	21.5	0.8	100.0
MIDWEST	79.5	1.2	2.2	2.1	15.0	0.1	100.0
NORTHEAST & MIDWEST	59.7	3.3	12.8	6.4	17.8	1.0	100.0
SOUTH	53.4	25.9	6.5	2.7	11.5	0.0	100.0
WEST	32.9	17.0	6.6	37.8	3.5	0.2	100.0
SOUTH & WEST	45.7	22.6	6.5	15.9	8.5	0.2	100.0
U.S. TOTAL	51.1	15.2	8.9	12.3	12.0	0.0	100.0

[1]Reflects fuel used in electricity generated within state borders, except for hydroelectric power, which includes net imports of electricity.
[2]Percentages may not total 100.0 due to rounding.
[3]Represents pumped storage during peak periods resulting in net consumption rather than production of energy
[4]Geothermal energy represents 8.5 percent of California's utility energy consumption.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 9, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), p. 121.

TABLE 17

UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Hydroelectric[1] Power	Nuclear	Wood	Total State Consumption
NEW ENGLAND							
Connecticut	0.0	0.0	5.2	0.1	4.6	0.0	1.0
Maine	0.0	0.0	1.1	1.7	1.9	0.0	0.5
Massachusetts	0.2	0.2	11.6	0.1	1.6	0.0	1.4
New Hampshire	0.2	0.0	1.1	0.4	0.0	0.0	0.3
Rhode Island	0.0	0.1	0.4	0.0	0.0	0.0	0.0
Vermont	0.0	•	•	0.4	1.3	29.4	0.2
Regional Total	0.4	0.3	19.4	2.7	9.5	29.4	3.4
MID-ATLANTIC							
Delaware	0.4	0.2	1.6	0.0	0.0	0.0	0.4
Maryland	1.0	0.2	2.1	0.5	4.2	0.0	1.3
New Jersey	0.6	2.2	3.2	(0.1)[2]	4.3	0.0	1.4
New York	1.3	3.6	18.0	13.0	6.4	0.0	5.2
Pennsylvania	7.5	0.1	4.9	0.2	5.2	0.0	5.0
Regional Total	10.7	6.2	29.8	13.6	20.1	0.0	13.2
MIDWEST							
Illinois	5.3	0.4	2.9	0.0	10.8	0.0	4.3
Indiana	5.5	0.1	0.2	0.2	0.0	0.0	2.9
Iowa	1.7	0.1	0.0	0.3	0.8	0.0	1.0
Michigan	4.4	0.5	1.7	1.9	6.3	0.0	3.4
Minnesota	1.7	0.2	0.1	0.3	3.7	0.0	1.4
Ohio	8.7	0.1	0.3	0.0	1.6	0.0	4.7
Wisconsin	2.2	0.2	0.1	0.6	3.6	41.2	1.7
Regional Total	29.6	1.5	5.3	3.4	26.8	41.2	19.4
SOUTH							
Alabama	3.7	0.0	0.0	2.1	8.7	0.0	3.2
Arkansas	0.7	1.5	0.2	0.4	3.3	0.0	1.1
District of Columbia	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Florida	1.8	4.7	22.0	0.1	5.3	0.0	4.2
Georgia	4.2	0.1	0.2	0.8	2.7	0.0	2.6
Kentucky	4.7	0.1	0.1	0.9	0.0	0.0	2.5
Louisiana	0.1	11.4	1.3	0.0	0.0	0.0	1.9
Mississippi	0.6	2.0	0.8	0.0	0.0	0.0	0.7
North Carolina	4.8	0.0	0.1	1.0	2.3	0.0	2.9
Oklahoma	1.1	7.8	0.0	0.4	0.0	0.0	1.8
South Carolina	1.7	0.1	0.6	0.4	6.4	0.0	1.8
Tennessee	3.8	0.0	0.1	2.0	1.7	0.0	2.4
Texas	6.1	37.9	0.4	0.3	0.0	0.0	8.9
Virginia	1.3	0.1	2.0	0.1	6.5	0.0	1.6
West Virginia	5.8	0.0	0.2	0.1	0.0	0.0	3.0
Regional Total	40.4	65.8	28.3	8.6	36.9	0.0	38.7

TABLE 17 (continued)

UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE
AS A PERCENTAGE OF NATIONAL TOTAL: 1981

Region and State	Coal	Natural Gas	Petroleum	Hydroelectric[1] Power	Nuclear	Wood	Total State Consumption
WEST							
Alaska	0.0	0.8	0.2	0.2	0.0	0.0	0.2
Arizona	2.3	1.6	0.1	2.3	0.0	0.0	1.7
California	0.0	18.0	13.1	10.2	1.2	0.0	5.8[3]
Colorado	1.9	0.4	0.1	0.5	0.3	0.0	1.1
Hawaii	0.0	0.0	3.2	0.0	0.0	0.0	0.3
Idaho	0.0	0.0	0.0	3.3	0.0	0.0	0.4
Kansas	1.6	2.2	0.2	0.0	0.0	0.0	1.2
Missouri	3.9	0.2	0.1	0.2	0.0	0.0	2.1
Montana	0.5	0.1	0.0	3.9	0.0	29.4	0.7
Nebraska	0.7	0.1	0.0	0.4	2.2	0.0	0.7
Nevada	0.9	1.2	0.1	0.6	0.0	0.0	0.7
New Mexico	1.5	1.5	0.0	0.0	0.0	0.0	1.0
North Dakota	1.3	0.0	0.0	1.9	0.0	0.0	0.9
Oregon	0.2	0.0	*	11.0	2.4	0.0	1.7
South Dakota	0.3	0.0	0.0	1.8	0.0	0.0	0.4
Utah	0.9	0.1	0.0	0.2	0.0	0.0	0.5
Washington	0.6	0.0	*	34.9	0.7	0.0	4.7
Wyoming	2.3	0.0	0.0	0.3	0.0	0.0	1.2
Regional Total	18.9	26.2	17.2	71.7	6.8	29.4	25.3
NORTHEAST	11.1	6.5	49.2	16.3	29.6	29.4	16.6
MIDWEST	29.6	1.5	5.3	3.4	26.8	41.2	19.4
NORTHEAST AND MIDWEST	40.7	8.0	54.5	19.7	56.4	70.6	36.1
SOUTH	40.4	65.8	28.3	8.6	36.9	0.0	38.7
WEST	18.9	26.2	17.2	71.7	6.8	29.4	25.3
SOUTH AND WEST	59.3	92.0	45.5	80.3	43.6	29.4	63.9
U.S. TOTAL[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1]Reflects fuel used in electricity generated within state borders, except for hydroelectric power, which includes net imports of electricity.
[2]Represents pumped storage during peak periods resulting in net consumption rather than production of energy.
[3]8.5 percent of California's electricity is generated by geothermal energy; this accounts for .005 percent of the total amount of electricity generated nationwide.
[4]Percentages may not total 100.00 due to rounding.
*Indicates value less than 0.05 percent but greater than zero.

SOURCES: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 9, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), p. 121.

TABLE 18

ELECTRIC UTILITY SALES AND ENERGY LOSSES AS A PERCENTAGE OF TOTAL STATE ENERGY CONSUMPTION: 1981

Region and State	Electricity Sales	Associated Losses
NEW ENGLAND		
Connecticut	10.8	25.7
Maine	8.0	18.9
Massachusetts	9.1	21.7
New Hampshire	10.0	23.7
Rhode Island	9.2	21.9
Vermont	10.2	24.2
Regional Average	9.5	22.6
MID-ATLANTIC		
Delaware	8.8	20.8
Maryland	10.3	24.4
New Jersey	8.0	19.0
New York	9.9	23.6
Pennsylvania	9.0	21.4
Regional Average	9.3	22.0
MIDWEST		
Illinois	8.9	21.1
Indiana	8.6	20.4
Iowa	9.1	21.7
Michigan	8.9	21.1
Minnesota	9.6	22.7
Ohio	9.5	22.5
Wisconsin	9.5	22.6
Regional Average	9.1	21.6
SOUTH		
Alabama	11.0	26.2
Arkansas	9.4	22.2
District of Columbia	16.0	37.8
Florida	12.5	29.6
Georgia	10.3	24.4
Kentucky	12.6	29.9
Louisiana	5.5	13.2
Mississippi	9.6	22.7
North Carolina	12.8	30.4
Oklahoma	9.1	21.7
South Carolina	13.0	30.9
Tennessee	14.1	33.5
Texas	7.5	17.9
Virginia	11.1	26.3
West Virginia	9.4	22.4
Regional Average	9.7	23.0

TABLE 18 (continued)

ELECTRIC UTILITY SALES AND ENERGY LOSSES AS A PERCENTAGE OF TOTAL STATE ENERGY CONSUMPTION: 1981

Region and State	Electricity Sales	Associated Losses
WEST		
Alaska	3.5	12.9
Arizona	12.3	29.2
California	9.1	21.6
Colorado	9.4	22.4
Hawaii	9.6	19.9
Idaho	14.9	35.3
Kansas	7.8	18.5
Missouri	10.3	24.3
Montana	10.8	25.6
Nebraska	9.4	22.3
Nevada	12.1	28.7
New Mexico	6.2	14.6
North Dakota	7.2	17.2
Oregon	13.6	32.3
South Dakota	8.7	20.6
Utah	8.5	20.2
Washington	16.0	37.9
Wyoming	6.6	15.6
Regional Average	10.2	24.2
NORTHEAST	9.3	22.1
MIDWEST	9.1	21.6
NORTHEAST AND MIDWEST	9.2	21.8
SOUTH	9.7	23.0
WEST	10.2	24.2
SOUTH AND WEST	9.9	23.4
U.S. AVERAGE	9.6	22.8

SOURCE: Staff calculations from Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), p. 4.

TABLE 19

PERCENTAGE OF HOUSEHOLDS HEATING BY ENERGY SOURCE: 1980[1]

Region and State	Coal	Utility Gas	Bottled, Tank, or LP Gas	Petroleum	Wood	Electricity	Other or No Fuel Used
NEW ENGLAND							
Connecticut	0.1	21.9	1.1	63.4	2.3	11.1	0.2
Maine	0.1	1.5	1.1	71.1	15.3	10.6	0.3
Massachusetts	0.2	32.4	1.1	53.8	2.1	10.3	0.1
New Hampshire	0.2	12.1	2.9	60.5	11.4	12.8	0.2
Rhode Island	0.2	32.3	1.2	57.9	1.9	6.3	0.2
Vermont	0.5	5.8	5.3	61.3	17.3	9.6	0.2
MID-ATLANTIC							
Delaware	0.2	27.4	3.0	55.7	1.9	11.6	0.2
Maryland	0.6	46.6	1.5	35.8	1.8	13.5	0.3
New Jersey	0.2	44.5	1.0	46.0	0.6	7.5	0.3
New York	0.3	37.8	1.3	53.7	1.9	4.6	0.5
Pennsylvania	3.5	49.0	0.9	34.3	1.6	10.4	0.3
MIDWEST							
Illinois	0.4	82.5	4.6	4.7	0.6	7.1	0.3
Indiana	0.5	61.3	6.6	12.2	2.6	16.6	0.2
Iowa	0.2	66.7	12.7	10.3	1.3	8.6	0.2
Michigan	0.2	76.5	3.5	12.8	1.7	5.0	0.3
Minnesota	0.1	59.2	7.7	22.2	2.6	8.0	0.3
Ohio	0.9	71.3	2.7	9.6	1.5	13.8	0.3
Wisconsin	0.1	58.1	7.8	25.0	2.3	6.5	0.2
SOUTH							
Alabama	1.0	48.4	16.1	0.5	7.5	26.2	0.2
Arkansas	*	56.2	15.7	0.1	10.8	16.9	0.2
D.C.	0.2	59.9	1.3	29.1	*	9.0	0.4
Florida	*	11.6	10.9	10.9	1.4	61.5	3.7
Georgia	0.1	54.7	18.1	2.2	5.4	19.4	0.3
Kentucky	5.9	51.3	7.3	6.0	6.2	23.0	0.2
Louisiana	0.0	68.6	7.1	0.1	1.6	22.4	0.2
Mississippi	0.1	45.5	20.7	0.2	8.7	24.7	0.1
North Carolina	0.4	16.3	5.7	40.1	8.4	28.9	0.2
Oklahoma	*	70.1	9.9	0.1	4.4	15.4	0.1
South Carolina	0.3	26.8	11.7	23.4	6.6	31.0	0.2
Tennessee	2.6	28.0	5.2	3.8	11.3	48.9	0.1
Texas	*	64.0	8.8	0.1	1.3	25.3	0.5
Virginia	1.1	30.5	2.2	34.2	6.6	25.3	0.2
West Virginia	5.1	58.7	2.4	10.5	4.5	18.7	0.2

TABLE 19 (continued)

PERCENTAGE OF HOUSEHOLDS HEATING BY ENERGY SOURCE: 1980[1]

Region and State	Coal	Utility Gas	Bottled, Tank, or LP Gas	Petroleum	Wood	Electricity	Other or No Fuel Used
WEST							
Alaska	2.1	35.1	1.4	38.7	7.3	14.8	0.8
Arizona	*	56.7	4.0	0.2	3.4	35.0	0.7
California	*	78.9	2.3	0.2	1.9	15.7	0.9
Colorado	0.7	81.8	5.4	0.5	1.7	9.6	0.3
Hawaii	*	4.6	1.2	0.3	1.0	4.5	88.4
Idaho	2.7	27.1	3.8	16.8	10.4	38.6	0.6
Kansas	*	81.3	7.8	0.4	2.6	7.8	0.1
Missouri	0.1	64.7	14.7	3.3	4.9	12.0	0.2
Montana	1.1	60.9	7.3	5.9	8.9	15.8	0.2
Nebraska	*	73.6	10.7	4.7	1.4	9.3	0.4
Nevada	0.1	48.1	5.0	7.1	2.7	36.7	0.2
New Mexico	0.2	76.5	9.6	0.4	5.9	7.0	0.4
North Dakota	2.0	40.0	12.0	27.8	0.6	17.2	0.4
Oregon	0.1	23.6	1.8	19.2	12.7	42.0	0.5
South Dakota	0.2	41.8	16.7	22.8	2.9	15.4	0.2
Utah	2.6	80.3	2.2	2.9	1.6	10.2	0.1
Washington	0.2	22.8	1.2	18.4	4.6	52.5	0.3
Wyoming	1.7	74.7	8.9	1.1	2.7	10.9	0.1
U.S. AVERAGE	0.6	53.3	5.5	18.1	3.2	18.4	0.8

[1]This table to be used in conjunction with Table 9, RESIDENTIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS PERCENTAGE OF STATE TOTAL: 1981.

*Indicates value less than .05 percent but greater than zero.

SOURCE: Staff calculations from Bureau of the Census, U.S. Department of Commerce, 1980 Census of Population and Housing, Provisional Estimates of Social, Economic and Housing Characteristics (Washington, D.C., March 1982), pp. 90-94.

IV. METHODOLOGY

ENERGY EXPENDITURES, COSTS, AND PRICES

Table 1, TOTAL STATE ENERGY EXPENDITURES: 1970 AND 1980, was generated by converting data obtained from the Energy Information Administration (EIA) from millions of dollars to a more readable billion dollar level.

Table 2, AVERAGE HOUSEHOLD ENERGY COSTS: 1970 AND 1980, was derived by dividing residential energy expenditures data, obtained from EIA, by the number of occupied household units by state, obtained from the Bureau of the Census. Household energy costs include purchases of electricity for appliances and home heating and cooling needs. The table does not include household transportation costs. Instead, the average regional motor gasoline costs were taken from EIA's Residential Energy Consumption Survey: Consumption Patterns of Household Vehicles, June 1979 to December 1980 (Washington, D.C., April 1982).

Table 3, INDUSTRIAL ENERGY PRICES: 1980, was created by converting price information obtained from EIA into dollars per million Btu.

ENERGY PRODUCTION

Table 4, TOTAL STATE ENERGY PRODUCTION BY SOURCE AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION: 1981, was derived by calculating the state production of each fuel as a percentage of total national production. The fuels included in total national production were coal, natural gas, petroleum, uranium, hydroelectric power (including industrial hydropower), and wood. Since wood is an indigenous energy source that is grown (produced) and burned (consumed) in relatively the same area, consumption data was assumed to be interchangeable with production. All production data was converted to trillions of Btu, using the EIA Monthly Energy Review (June 1983) conversion factors for 1981 data.

Table 5, ENERGY SELF-SUFFICIENCY INDEX: 1981, was generated by dividing total state energy production (coal, natural gas, petroleum, hydroelectric power, nuclear power, and wood consumption) by total state energy consumption (using the same fuels as above). The production data for Table 5 substitutes nuclear power for uranium production, which was used in Table 4. Electricity produced from nuclear power is considered an indigenous source of state energy because capital investment in nuclear plants is a larger percentage of nuclear costs than uranium. In general, states below 100.0 percent are energy "dependent" and consume more energy than they produce. States above 100.0 percent are energy "independent" and produce more energy than they consume. Please note that not all energy produced in a state is consumed in that state. Some states both export and import energy. Therefore, the index is only a rough indicator of self-sufficiency.

Table 6, NATURAL GAS OVERVIEW: 1981, was derived directly from EIA data for natural gas expenditures and value of production at the wellhead. Figures for natural gas consumption and production were obtained by calculating state consumption and production as percentages of national totals.

ENERGY CONSUMPTION

Three major adjustments to EIA's State Energy Data Report (SEDS) were made to generate Tables 7-14. These adjustments concerned electricity and wood data and are explained here. Tables 7 and 8, which show STATE ENERGY CONSUMPTION BY SOURCE, reflect the consumption of primary energy by all sectors in a state, including fuels used by utilities to generate electricity. Since electricity is a secondary source of energy, Tables 9-14, which show RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL SECTOR CONSUMPTION BY SOURCE, do not include fuels used to generate electricity because these fuels are presented in Tables 15 and 16, UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE. These two tables show primary fuel consumption used to generate electricity consumed in the four sectors. Because some states either sell electricity or buy electricity produced in other states, Canada, or Mexico, the primary energy consumed in a state may be higher than its sector consumption. In 1981, for example, West Virginia's coal consumption was equal to 111.6 percent of its total state energy consumption. However, the amount of electricity generated for use in other states (exported) by itself equaled 61.7 percent of West Virginia's total in-state energy consumption.

Another adjustment for electricity data is the subtraction of electrical energy losses from total state sector energy consumption figures in Tables 3-8. This adjustment is important because end-use consumption of electricity represents only about one-third of the total value of the primary energy consumed to produce electricity; the rest is lost in generation, transmission, and distribution. In 1981, for example, the national energy input to electric utilities (primary energy used) was 24.7 quads. Electricity sales in the four sectors totaled only 7.3 quads, which means energy losses totaled 17.4 quads. Thus energy consumption by end users is presented more accurately by excluding electrical energy losses.

The adjustment for wood data involves the calculation of total state energy consumption figures. Data for total state energy consumption was obtained from EIA's SEDS. However, the only wood data published in SEDS is utility sector wood and waste. In the publication Estimates of Wood Energy Consumption from 1949-1981, EIA provided more comprehensive wood data estimates by sector. Therefore, the SEDS wood and waste data were replaced by estimates of wood energy consumption to calculate total state energy consumption.

Table 7, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, was derived by calculating each fuel's percentage of a state's total energy consumption. As mentioned above, adjustments were made for wood data. The column entitled "Electricity Imported (Exported) Across State Borders" refers to excess electricity generated in a state and sold to neighboring states or electricity purchased from other states.

Table 8, STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, was obtained by calculating the state consumption of each fuel as a percentage of total national energy consumption. Estimates of wood consumption as described above were included.

Tables 9-11, RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL SECTOR STATE ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE TOTAL: 1981, were derived by the same method as Table 7.

Tables 12-14, RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF NATIONAL TOTAL: 1981, were generated by the same method as Table 8.

Table 15, TRANSPORTATION SECTOR ENERGY CONSUMPTION AS A PERCENTAGE OF NATIONAL TOTAL: 1981, was derived by calculating state motor gasoline consumption and state population as percentages of national totals. Motor gasoline is the only fuel presented in the transportation sector because other fuels are used mainly for fuel transmission.

Tables 16 and 17, UTILITY SECTOR ENERGY CONSUMPTION BY SOURCE AS A PERCENTAGE OF STATE AND NATIONAL TOTAL: 1981, were generated by the same method as Tables 7 and 8, respectively. The fuels presented in these tables are used by utilities to generate electricity.

Table 18, ELECTRIC UTILITY SALES AND ENERGY LOSSES AS A PERCENTAGE OF TOTAL STATE ENERGY CONSUMPTION: 1981, was generated by calculating electricity sales and associated losses as percentages of total state energy consumption. The amount of electricity sold is considered to be the amount of electricity consumed by end users in each state. Associated energy losses are defined as all losses incurred in the generation of electricity.

Table 19, PERCENTAGE OF HOUSEHOLDS HEATING BY ENERGY SOURCE: 1980, was generated by calculating the number of households using a fuel as a primary heat source as a percentage of the total number of occupied households in a state.

GLOSSARY

SECTOR DEFINITIONS

Residential Sector: Energy consumed by private household establishments primarily for space heating, water heating, air conditioning, cooking, and clothes drying.

Commercial Sector: Energy consumed by non-manufacturing business establishments. Included are motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises, as well as health, social, and educational institutions, and energy consumed by federal, state, and local government.

Industrial Sector: Energy consumed by manufacturing, construction, mining, agriculture, fishing, and forestry establishments.

Transportation Sector: Energy consumed to move people and commodities in both the public and private sectors. Included are military, railroad, vessel bunkering, and marine uses, as well as the pipeline transmission of natural gas.

Electric Utility Sector: Energy consumed by privately and publicly owned establishments that generate electricity primarily for resale.

OTHER TERMS

Bottled Gas: Natural gas stored in bottles that is delivered in the form of butane or propane. Usually used in rural areas.

British Thermal Unit (Btu): The amount of energy required to raise the temperature of one pound of water one degree Fahrenheit at or near 39.2 degrees Fahrenheit. An average Btu content of fuel is a heat value per unit quantity of fuel as determined from tests of fuel samples.

Coal: Anthracite, bituminous coal, and lignite.

Distillate Fuel Oil: A light oil distilled from crude oil during the refining process. Included are products known as No. 1 and No. 2 heating oils, diesel fuels, and No. 4 fuel oil, which conform to ASTM Specifications D396 or D975. These products are used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel), and electric power generation.

Geothermal Power: Electricity generated at a conventional type steam electric power plant whose turbines are driven by either steam produced from hot water or natural steam, both below the surface of the earth's crust.

Hydroelectric Power: Electricity generated by an electric power plant whose turbines are driven by falling water.

Liquified Petroleum (LP) Gases: Propane, propylene, butanes, butylene, ethane-propane mixtures, propane-butane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

Motor Gasoline: A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark ignition engines. Included are leaded and unleaded products and all refinery products listed in ASTM Specification D439.

Natural Gas: A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in natural underground reservoirs at reservoir conditions.

Nuclear Power: Electricity generated at an electric power plant whose turbines are driven by steam generated in a reactor by heat from the fissioning of nuclear fuel.

Petroleum: A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, refined petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

Quad: 1,000,000,000,000,000 Btu. One quadrillion Btu equals approximately 500,000 barrels per day of crude oil for one year, or 30 days of U.S. motor gasoline usage at the 1982 rate.

Residual Fuel Oil: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and No. 6 fuel oil that conform to ASTM Specification D396, Navy Special Fuel Oil, Bunker C fuel oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes.

Tank Gas: Natural gas stored underground. Usually found in rural areas.

United States: Unless otherwise noted, the United States includes the 50 states and the District of Columbia.

Utility Gas: Natural gas transported by pipe into homes. Usually used in urban areas or areas with significant concentrations of homes.

Wood: The term refers to fuelwood such as solid cord wood or solid limb wood burned as fuel in the residential sector. In the commercial, industrial, and utility sectors, the term refers to woodfuel. This includes all types of wood, wood-derived fuel, and wood byproducts burned as fuel such as cord wood, limb wood, spent liquor, hog fuel, wood chips, bark, forest residues, and charcoal.

SOURCES FOR DEFINITIONS: Energy Information Administration, U.S. Department of Energy, State Energy Data Report, 1960-1981 (Washington, D.C., June 1983), pp. 577-579, and Estimates of U.S. Wood Energy Consumption from 1949-1981 (Washington, D.C., August 1982), p. 2.